

# CATALOGUE OF THE COLLECTIONS

IN THE

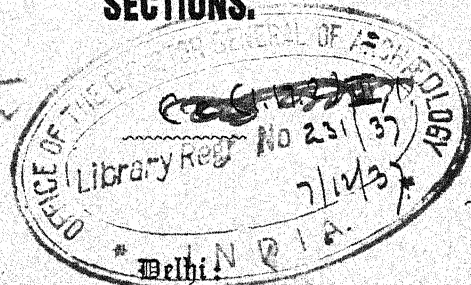
## JEYPORE MUSEUM

COMPILED BY

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BRIGADE-SURGEON LIEUTENANT-COLONEL, I.M.D.: HONORARY SECRETARY OF  
THE JEYPORE MUSEUM AND OF THE EXHIBITION OF INDIAN ART MATERIAL  
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FERENCE, LAHORE, 1894: GOVERNOR AND MEMBER OF COUNCIL  
OF THE IMPERIAL INSTITUTE, 1891-2, &C., AUTHOR  
OF SEVERAL WORKS ON INDIAN ART.

*Ce II. 1.17.2-069.53*  
*Hen*  
**PART II.—EDUCATIONAL AND INDUSTRIAL  
SECTIONS.**



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THE UPPER FLOOR OF THE MUSEUM.

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EDUCATIONAL SECTION.

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CATALOGUE  
PART II.

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ANIMAL KINGDOM No. II.

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WALL FRAMES Nos. I. to IX.

**P**ATERSON'S ZOOLOGICAL DIAGRAMS, illustrating the classification of the Animal Kingdom, beginning with the lowest forms of Animal life.

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WALL FRAME No. I.

SHEET I.

INVERTEBRATE ANIMALS.

Sub-kingdoms—Radiata and Protozoa.

(Vincent Brooks, Day & Son, Lithographers, London, W. C.)

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Class—ECHINODERMATA.

- Fig. 1. Star-fish. *Asteria aurantiaca*.  
Fig. 2. Purple Sea Urchin. *Echinus lividus*, with the spines.  
Fig. 3. Sea Urchin (the Piper), with the spines removed. *Cidaris papillata*.  
Fig. 4. Spine of *Cidaris*.  
Fig. 5. Sea Cucumber. *Cucumaria Drummondii*.

*Class—ACALEPHCE.*

- Fig. 6. Jelly-fish. *Cyanea chrysaora*.  
 Fig. 7. Small Jelly-fish. *Sarsia tubulosa*.  
 Fig. 8. Physalia. *P. Utriculus*.  
 Fig. 9. Diphya. *D. Appendiculata*.

*Class—POLYPL.*

- Fig. 10. Hydra, seizing its prey.  
 Fig. 11. Sea-fir. *Sertularia abietina*.  
 Fig. 12. Portion of same magnified with Polype expanded.  
 Fig. 13. Sea-rush. *Virgularia mirabilis*.  
 Fig. 14. Portion of same magnified.  
 Fig. 15. Tubularia. *T. indivisa*.  
 Fig. 16. Actinia. *A. mesambryanthemum*.  
 Fig. 17. Corynactis. *C. viridis*.  
 Fig. 18. Cydippe. *C. Pomiformis*.

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**Sub-kingdom—Protozoa.**

*Infusoria—*

- Fig. 19. Vorticella. *V. convallaria*.  
 Fig. 20. Bursaria. *B. leucas*.

*Spongiadæ—*

- Fig. 21. Halichondria. *H. palmata*.

*Rhizopoda—CLASS FORAMINIFERA.*

- Fig. 22. *Polystomella crispa*.  
 Fig. 23. *Rotatia beccarii*.
-

## WALL FRAME No. II.

## SHEET H.

## INVERTEBRATE ANIMALS.

## Sub-kingdom—Annulosa.

*Classes*—CRUSTACEA, ROTIFERA, ANNELIDA, TURBELLARIA,  
ENTOZOA.

*Class*—CRUSTACEA.

- Fig. 1. Lobster. *Homarus vulgaris*.
- Fig. 2. Spotted Shrimp. *Squilla maculata*.
- Fig. 3. Sandhopper. *Talitrus locusta*.
- Fig. 4. Water-flea. *Daphnia pulex*.
- Fig. 5. Cypris. *Cypris vidua*.
- Fig. 6. Cyclops. *Cyclops quadricornis*.
- Fig. 7. King-crab. *Limulus polyphemus*.
- Fig. 8. Barnacle. *Lepas anatifera*.
- Fig. 9. Acorn shell. *Balanus tintinnabulum*.

*Class*—ROTIFERA.

- Fig. 10. Wheel animalcule. *Rotifer vulgaris*.

*Class*—ANNELIDA.

- Fig. 11. Group of Serpulæ. *Serpula contortuplicata*.
- Fig. 12. Leech. *Hæmopsis sanguisuga*.
- Fig. 13. Earthworm. *Lumbricus terrestris*.
- Fig. 14. White Lug-worm. *Nephtys margaritacea*.

*Class*—TURBELLARIA.

- Fig. 15. Planaria.

*Class*—ENTOZOA.

- Fig. 16. Tapeworm. *Tœnia solium*.
- Fig. 17. *Cysticercus*, an early condition of the Tapeworm.

Class—

Fig.

Fig.

Fig.

Fig.

Class—

Fig.

Fig.

Fig.

Fig.

Fig.

Fig.

Fig.

Fig.

Fig.

Infusor

Fig.

Fig.

Spongi

Fig.

Rhizop

Fig.

Fig.

## WALL FRAME No. III.

SHEET G.

### INVERTEBRATE ANIMALS.

Sub-kingdom—Annulosa.

Class—ARACHNIDA, INSECTA, AND MYRIAPODA.

Class—ARACHNIDA.

Fig. 1. Spider. *Mygale Avicularia*.

Fig. 2. Scorpion. *Scorpio Africanus*.

Fig. 3. Mite. *Acarus*.

Class—INSECTA.—Nine Orders.

Order—

Coleoptera. Fig. 4. Stag Beetle. *Lucanus Cervus*.

Orthoptera. Fig. 5. Grasshopper. *Pontettix Pedestris*.

Neuroptera. Fig. 6. Dragon-fly. *Cardulegaster annulatus*.

Hymenoptera. Fig. 7. Humble Bee. *Bombus Lapidarius*.

Strepsiptera. Fig. 8. Stylops. *Xenos Peckii*.

Lepidoptera. Fig. 9. Emperor Moth. *Saturnia Pavonia minor*.

Hemiptera. Fig. 10. Water scorpion. *Nepa cinerea*.

Diptera. Fig. 11. Gad-fly. *Tabanus bovinus*.

Aptera. Fig. 12. Flea. *Pulex irritans*.

Class—MYRIAPODA.

Fig. 13. Scolopendra. *Lithobius forficatus*.

Fig. 14. Millepede. *Inlus terrestris*.



WALL FRAME No. IV.  
SHEET F.  
INVERTEBRATE ANIMALS.  
Sub-kingdom—Mollusca.  
SEVEN CLASSES.

*Class I.*—CEPHALOPODA.

- Fig. 1. Paper nautilus. *Argonauta argo*.  
Fig. 2. Pearly nautilus. *Nautilus pompilius*.  
Fig. 3. Cuttle-fish. *Sepia officinalis*.

*Class II.*—GASTEROPODA.

- Fig. 4. Whelk. *Buccinum undatum*.  
Fig. 5. Worm shell. *Vermetus lumbricatus*.  
Fig. 6. Top shell. *Torohus ziziphinus*.  
Fig. 7. Ear shell. *Haliotis tuberculatus*.  
Fig. 8. Limpet shell. *Patella vulgata*.  
Fig. 8a. Animal of same seen from below.  
Fig. 9. Bubble shell. *Bulla lignaria*.  
Fig. 10. Pleurobranch. *Pleurobranchus plumula*.  
Fig. 11. Eolis. *E. olivacea*.  
Fig. 12. Carinaria. *C. Cymbium*.  
Fig. 13. Slug. *Limax cinereus*.  
Fig. 14. Cyclostoma. *C. elegans*.

*Class III.*—PTEROPODA.

- Fig. 15. Olio. *C. borealis*.  
Fig. 16. Hyalea. *H. uncinata*.

*Class IV.*—LAMELLIBRANCHIATA.

- Fig. 17. Gaper. *Mya truncata*.  
Fig. 18. Scallop. *Pecten maximus*.

## Class—

Fig.

Fig.

Fig.

Fig.

## Class—

Fig.

Fig.

Fig.

Fig.

Fig.

Fig.

Fig.

Fig.

Fig.

## Infusor

Fig.

Fig.

## Spongi

Fig.

## Rhizon

## Class V.—BRACHIOPODA.

Fig. 19. Lingula. *L. anatina*.Fig. 20. Lamp shell. *Terebratula globosa* enlarged.

Fig. 20a. Lateral view of same exhibiting one of the fringed arms, as if seen through the shell.

## Class VI.—TUNICATA.

Fig. 21. Botryllus. *B. Polyclus*.Fig. 22. Sea squirt. *Ascidia mentula*.

## Class VII.—POLYZOA.

Fig. 23. Sea mat. *Flustra foliacea*.

Fig. 23a. Portion of the same magnified.

Fig. 24. Fredericella. *F. sultana* magnified.

Fig. 24a. Same, natural size.

## WALL FRAME No. V.

## SHEET E.

## VERTEBRATE ANIMALS.

## Class—Pisces. Nine orders.

## Order—Acanthopterygii.

Fig. 1. Perch. *Perca fluviatilis*.

## Order—Malacopterygii Abdominales.

Fig. 2. Salmon. *Salmo salar*.

## Order—Malacopterygii Sub-Brachiales.

Fig. 3. Turbot. *Pleuronectes maximus*.

## Order—Malacopterygii Apodes.

Fig. 4. Sharp-nosed Eel. *Anguilla acutirostris*.

## Order—Lophobranchii.

Fig. 5. Pipe-fish. *Syngnathus acus*.

*Order*—Plectognathi.Fig. 6. Globe-fish. *Diodon histrix*.*Order*—Sturiones.Fig. 7. Sturgeon *Accipenser sturio*.*Order*—Plagiostomi.Fig. 8. Thorn-back Ray. *Raia clavata*.Fig. 9. Dog-fish. *Scyllium canicula*.*Order*—Cyclostomi.Fig. 10. River Lamprey. *Petromyzon fluviatilis*.

## WALL FRAME No. VI.

## SHEET D.

## VERTEBRATE ANIMALS.

## Classes—Reptilia and Amphibia.

*Class*—REPTILIA.*Order*—Chelonia.Fig. 1. Tortoise. *Testudo Græca*.*Order*—Sauria.Fig. 2. Lizard. *Lacerta Viridis*.*Order*—Ophidia.Fig. 3. Boa. *Boa Constrictor*.*Class*—AMPHIBIA.*Order*.—Batrachia.Fig. 4. Frog. *Rana temporaria*.Fig. 5. Axolotl. *Siredon pisciforme*.



WALL FRAME No. VII.  
SHEET C.  
VERTEBRATE ANIMALS.  
Class—Aves. Five orders.

*Order*—Raptores.

Fig. 1. Peregrine Falcon. *Falco peregrinus*.

*Order*—Insessores.

Fig. 2. Magpie. *Pica caudata*.

*Order*—Rasores.

Fig. 3. Silver Pheasant. *Phasianus nycthemerus*.

*Order*—Grallatores.

Fig. 4. Heron. *Ardea cinerea*.

*Order*—Natatores.

Fig. 5. Wild Duck. *Anas boschus*.

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WALL FRAME No. VIII.  
SHEET B.  
VERTEBRATE ANIMALS.  
Class—Mammalia. Twelve orders.

*Order*—Edentata.

Fig. 1. Sloth. *Bradypus didactylus*.

*Order*—Cheiroptera.

Fig. 2. Long-eared Bat. *Plecotus auritus*.

*Order*—Insectivora.

Fig. 3. Hedge-hog. *Erinaceus Eropœus*.

*Order*—Rodentia.

Fig. 4. Squirrel. *Sciurus vulgaris*.

*Order*—Marsupialia.

Fig. 5. Red Kangaroo. *Macropus rufus*.

*Order*—Monotremata.

Fig. 6. Ornithorhyncus.

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## WALL FRAME No. IX.

### SHEET A.

## VERTEBRATE ANIMALS.

**Class—Mammalia. Twelve orders.**

*Order*—Bimana.

Fig. 1. Man.

*Order*—Quadrumania.

Fig. 2. Spider monkey. *Ateles ater*.

*Order*—Carnivora.

Fig. 3. Jaguar. *Leopardus Onca*.

*Order*—Ruminantia.

Fig. 4. Red Deer. *Cervus elaphus*.

*Order*—Pachydermata.

Fig. 5. Hippopotamus. *H. amphibius*.

*Order*—Cetacea.

Fig. 6. Common Porpoise. *Phocœna communis*.

## ANIMAL KINGDOM No. II.

*Desk Cases attached to the Gallery Rails,  
Nos. X to XXVI.*

Glass and Enamelled Models made by Herr Blaschka of Dresden to illustrate the great division of the Animal Kingdom known as the Invertebrata. (Nos. 10 to 213).

The Animal Kingdom includes eight sub-kingdoms, each of which is generally more complex than the one which precedes it.

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 INVERTEBRATA.

## Sub-kingdom I.

Protozoa, the simplest animals, which have neither cavity nor nervous system, and thereby differ from other sub-kingdoms which possess at some time in their life-history a body cavity, and which are collectively called Metazoa.

## Class I.—RHIZOPODA.

*Amoeba proteus*. Pallas.  $\frac{250}{1}$ . Two forms. *Proteus animalcule*. See Plate A., Pillar No. 10.

13

*Diffugia pyriformis*. Perty.  $\frac{200}{1}$ . See Plate D., Pillar 10.

12

*Order Monera* represented in plates B. and C., Pillar Frames No. 10.

*Order Foraminifera* represented in plate E., Pillar Frames No. 10.

*Class II.—PROTOPLASTA.*

Actinophrys Sol. Ehrenberg. The sun animalcule. Normal form  $\frac{1000}{1}$  10

Actinophrys Sol. Ehrenberg. The sun animalcule. A specimen in the state of dividing itself.  $\frac{1000}{1}$  11

Actinoma astercanthion Hæckel. 14

*Class III.—GREGARINÆ.*

*Represented in Pillar Frame No. 10.*

*Class IV.—RADIOLARIA.*

Spongosphæra Streptacantha. Hæckel. 15

*Class V.—INFUSORIA.*

*Represented in frames, Pillar Frame No. 10, and Wall Frame No. 119. N.-W. Gallery.*

**Sub-kingdom II.**

Polystomata, sponges which have an internal cavity with one outlet and many inlets, bounded by a bilaminar wall.

(The specimens, Nos. 1126, 1130, 1131, and 1135 are in the Long Case No. 110, Animal Kingdom No. III. ).

*Sycandra raphanus* O. S. Amphiblastula stage.  $\frac{600}{1}$ . 1126.

*Sycandra raphanus* O. S. Amphiblastula after the invagination  $\frac{600}{1}$ . 1130.



*Sycandra raphanus*  $\frac{600}{1}$ . *Amphiblastula vertically intersected*. 1131.

*Sycandra raphanus*  $\frac{100}{1}$ . *Young olynthus*. 1135.

### Sub-kingdom III.

Coelenterata; Jelly-fishes and sea anemones, having a stomach cavity and a body cavity as an outgrowth therefrom and a radiate symmetry. Mouth bordered by tentacles armed with thread-cells.

#### Class I.—HYDROZOA

##### Sub-class 1.—Hydroida.

Nos. 1136, 1137, 1117, 1129, 1121, 1120, 1125, 1116, 1118, 1128, 1122, 1123, and 1119. *Long Case No. 110. Animal Kingdom No. III.*

*Eudendrium ramosum*.

45

*Tubularia indivisia*. L. (a) colony, natural size. (*Long Case No. 110, Animal Kingdom No. III.*). 1136.

*Tubularia indivisia*. L. (b)

(i) a hydranth, enlarged :

(ii) one of the racemose like bunches of Gonophores, enlarged (*Long Case No. 110*). 1137.

*Laomedea amphora*. Agassiz.

46

*Bougainvillea Superciliaris*. Agassiz. (*Long Case No. 110, Animal Kingdom No. III.*). 1117.

*Aequorea Cyanea*. 1129.

• *Oceania phosphorica*. Peron. 1121.

*Modeeria formosa*. 1120.

- Turris digitalis*. Forbes. 1125.  
*Aegina rosea*. Esch. 1116.  
*Tetranema aeronauticum*. 1118.  
*Sarsia Siphonophora*. 1128.  
*Slabberia halterata*. 1122.  
*Willia stellata*. 1123.  
*Lizzia octopunctata*. Forbes. 1119.

Order *Hydra* represented in plate A., Pillar Frames No. 12.

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Sub-class 2—Siphonophora.

- Apolemia Uvaria*, Lesueur. Long Case No. 110, *Animal Kingdom*  
 No. III. 1134.

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Sub-class 3—Discophora.

- Nos. 1132, 1133, and 1127. Long Case No. 110, *Animal*  
*Kingdom No. III.*

- Aurelia aurita*. L. Sea blubber. 1132.  
*Pelagia Cyanella*. Sea blubber. 1133.  
*Rhizostoma pulmo*. 1127.  
*Lucernaria auricula*. Fabr.

47

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Sub-class 4—Ctenophora.

- Beroe punctata*. Long Case No. 110. 1124.  
*Cestum Veneris* Lesueur. Girdle of Venus.

48

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Class II.—ACTINOZOA.

Sub-class I—Zoanthari, Sea-anemones.

- Aiptasia Couchii*. Gosse.

23

14	
Aureliania heterocera. Gosse.	24
Bunodes gemmacea, Var. Rosea ; gem pimplet.	25
Cerianthus. Lloydii. Gosse.	26
Ilyanthus mitchellii. Gosse. Pearlet.	27
Anthea Cereus. Var. Maxima. Opelet.	28
Paractis olivacea. Ehrenberg.	29
Actinia mesembryanthemum, var. fragacea. Gosse. Beadlet.	30
Chitonactis (Bunodes) coronata. Gosse.	31
Sargarita bellis, E., Var. Tyriensis, Gosse.	32
Sargarita troglodytes ; G., Var. aurora, Gosse.	33
Sargarita venusta. Gosse.	34
Peachia hastata. Gosse.	35
Phellia Brodricii. Goose.	36
Sargarita Viduata, O. F. Muller, Var. aleurops, Gosse. Snake-locked anemone.	37
Stauroactis clavigera. Drayton.	38
Phymactis diadema. Drayton.	39

*Tealia Crassicornis*, Müller, Var. *purpurea*. G.

### Struggle of Actiniæ.

The group figure 1. shows two different representatives of the Actinæ, viz.,—Fig. *a*. *Actinia mesembryanthemum* var. *fragacea*, and fig. *b*. *Sagartia bellis* var. *sordida* in a state of animosity against one another, such as may occur in the aquarium, if specimens of the Actiniæ and Sagartiæ are kept together. In *A. Mesembryanthemum* the nettling organs swell to abnormal size, forming strong nettling batteries. *Sagartia*, after having been hurt by the nettling cells of *Actinia*, has suddenly retracted itself and copiously emitted its acontia, missile cords, filled with nettling capsules (cnidæ); the cnidæ are excessively minute vesicles, having the power of shooting out a nettling thread (*Ecthoræum*). Fig. 2. shows a nettling cell of *Actinia*, *Ecthoræum* coiled up within the capsules. Fig. 3. Cnida of *Sagartia* with the *Ecthoræum* expelled, both strongly magnified.

*Cladocora Cespitosa*. Lamarck.

(i) A colony, natural size.

(ii) Individual, magnified.

A great group of *Actinoloba dianthus* (*Plumose anemone*) representing all varieties, forms, and stages of growth. Long Case No. 110. 1138.

*Zoanthus Solanderii*, Lesueur.

*Balanophyllia italica*. Michelian; Coral cup.

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### Sub-class 2.—Alcyonaria.

*Corallium rubrum*. Lk. Red Coral.



16	
Gorgonia verrucosa. Pallas.	Sea fan or sea shrub.
	17
Aleyonium digitatum.	
(i) Stock (colony), natural size.	
(ii) A single polype, magnified.	
Deadman's fingers.	
	18
Spongodes Celosia. Lesson.	
	19
Virgularia mirabilis. O. F. Muller.	Sea rush.
	20
Pennatula phosphorea. Ellis.	Sea pen or sea feather.
	21
Tubipora Hemprichi. Eh.	Organ pipe coral.
(i) A piece with polypites, (natural size).	
(ii) A single polype (magnified).	
	22

#### Sub-kingdom IV.

Echinodermata. Star-fishes and sea-urchins, also radiated with a body cavity separate from the stomach, a nervous system, and a system of water tubes which are agents in locomotion.

##### Class I.—CRINOIDEA OR SEA-LILIES.

Comatula Hamata. Kuhl and Van Hasselt. Rosy feather star.

53

##### Class II.—STELLERIDA OR STAR-FISHES.

Astercanthion pallidus Ag. Three stages of development of the Brachina. Larva. Star-fish.

49

*Astercanthion pallidus*. Ag. Fully developed Brachiolaria.  
Larva, showing within on both sides of the stomach the  
actinal and ab-actinal disk of the young star-fish.

50

*Astercanthion pallidus*. Ag. 1, 2, Stomach of the Brachio-  
laria only showing the development of the star-fish = em-  
bryo. Two stages—(a) actinal (ambulacral) disk; (b) Ab-  
actinal disk; (w) water-tubes; m. stomach; an. anus.  
3, 4, Two stages of the young star-fish after having re-  
absorbed the Brachiolaria = Larva.

51

*Astercanthion pallidus*. Ag.

i. Achinoid form of the star-fish.

ii. Young *astercanthion*, perfectly developed.

52

*Ophiocoma picta*, Kuhl and V. Hasselt. Brittle star.

54

*Ophiomastrix annulosa*. Lamarck. Brittle star.

55

*Ophiothrix fragilis*. O. F. M. Brittle star.

56

*Ophiomastrix annulosa*. Brittle star, (a spirit specimen). Shelf  
No. 234, Animal Kingdom No. I.

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Class III.—ECHINOIDEA (Sea-urchins).

*Mammiliated sea urchin*; a spirit specimen. Shelf No. 234, Animal  
Kingdom No. I.

*Uraster Rubens* (five-finger star-fish) and its anatomy. Plates  
A. and B., Pillar Frames No. 14.

*Echinus sphaera* (Common sea-urchin) and its anatomy. Plates  
C. and D., Pillar Frames No. 14.

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Class IV.—HOLOTHURIDEA OR SEA-CUCUMBERS.

*Sporadipus tremula*. Gunn.

57

Synapta fasciata. Kuhl and Hass.	58
Holothuria Edulis. Lesson. Trepang.	59
Anapta gracilis. Semper.	60
Synapta lumbricoides. Esch.	61
Thyone fusus. O. F. Müller.	67

### Sub-kingdom V.

Vermes; worms which are bilaterally symmetrical, and composed of successive similar segments, with no jointed limbs, and with a water-vascular system which has no locomotory function.

*Order Tæniada (Tape-worms), represented in plate A., Pillar Frames No. 16.*

*Order Trematoda, represented by Distoma (fluke-worm) in plate B., Pillar Frames No. 16.*

*Order—TURBELLARIA OR LEAF-WORMS.*

*Sub-order I.—Planarida.*

*Section 1.—Rhabdocœla :—Intestine straight, not branched ; body elongated, rounded, or oval.*

Typhloplana fulva. O. F. M.	62
Mesostomum rostratum. D.	63
Prostomum Lineare; Oersted.	64

*Section 2.*—Dendrocoela :—Intestine branched or arborescent ; body flat and broad.

Centrostromum polycyclium. Schmarda.	65
Dendrocoelum lacteum ; cœsted.	66
Eurylepta auriculata. O. F. M.	68
Leptoplana purpurea. Schmarda.	69
Leptoplana tremellaris.	
i. Leptoplana, magnified. $\frac{5}{1}$ .	
ii. A view of the organization.	
s. Stomach and the gastrovascular embranchments.	
r. Male genitals. o. Female genitals.	70
Polycelis microsora. Schm.	71
Polycelis orbicularis. Schm.	72
Proceros clavicornis. Schm.	73
Stylochus dictyotus. Schm.	74
Stylostomum variabile. Lang.	75
Tetracelis marmorata, O. F. Müller.	76
Thysanozoon discoideum. Schmarda.	77



*Sub-order II.—NEMERTIDA OR RIBBON-WORMS.*

- Borlasia trilineata.* Schmarda. 78
- Meckelia macrorrhochma*; Schm. 80
- Nemertes flaccida.* O. F. Müller.
- i. Worm, natural size.
  - ii. Anatomy. (1) Intestinum. (2) Genitals, the three filaments represent the blood-vessel system. 81

*Order—ANARTHROPODA.*

*Class 1.—Geyphrea or Spoon-worms.*

- Bonellia Viridis.* Rolando. 79
- Phascolosoma vulgare.* Dies.
- i—*Phascolosoma*, natural size.
  - ii—Anatomy; *d.* Intestinum; *a.* Anus; *m.* muscles; *s.* organ. Segmentalis. 82

*Class 2.—Annelida.*

*Order 1.—Hirudinea. (Discophora or Suctoria).*

- Clespine bioculata.* Bergm. 83
- Clespine Sanguinea.* De Filippi. 84
- Hirudo medicinalis.*
- i. The leech, natural size.
  - ii. Anatomy, (the animal being opened on the ventral side) 1. stomach; 2. the two blind processes of the stomach; 3. Intestinum; 4. the chain of ganglia; 5. epididymis; 6. Ductus spermaticus et testis spermato theka; 7. uterus; 8. penis; 9. vesicles of

respiration (blood-vessels). For further details  
see Plate B., Pillar Frames No. 16.

*Order Oligochaeta represented by Lumbricus Terrestris, the common  
Earth-worm. Plate C., Pillar Frames No. 16.*

*O. der.*—POLYCHÆTA (marine Annelides).

*Sub-order 1.*—Tubicola.

(The sedentary worms that inhabit variously formed tubes).

*Pista Cristata*, O. F. Müller.

*Sabella penicillus*.

*Sabellaria alveolata*. Lk.

i. A colony, natural size.

ii. The worm, magnified.

*Serpula contortuplicata*. L.

*Terebella conchilega*; Pallas.

*Sub-order 2.*—Errantia.

(Annelides having a free and wandering habit of life.)

*Nereis margaritacea*. Leach. Sea Centepede.

i. The worm, natural size.

ii. Anterior end, magnified.

*Eunice norvegica*, L.

i. Worm, natural size.

ii. Anterior end, magnified.

*Arenicola marina* ; lugbait worm.

85

*Autolytus cornutus*.

87

*Autolytus cornutus*, Ag.

- i. The parent stock :
- ii. The gemmation of tentacles on the 13, ring of the parent stock, producing a male autolytus :
- iii. A female autolytus from the ventral side showing the bag in which the eggs are developed (young parent stocks, alternation of generation ).

88

*Autolytus cornutus*. Ag.

Five stages of development of the parent stock.

89

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## Sub-kingdom VI.

**Mollusca** ; oysters, snails, &c., possessing soft bodies enveloped in a leathery mantle, no jointed limbs, a circulating system, often an external shell and an unsymmetrical nervous system.

**Class I.**—Lamellibranchiata or Bivalve Molluscs which are all either marine or inhabitants of fresh water.

**Sub-class A.**—Asiphonida, *i.e.*, animals having no respiratory siphons.

*Lima squamosa*. L. K.

97

*Mytilus edulis*. L. mussel.

- i. Living state.
- ii. Animal, after it has been cut out from the shell ; muscles cut off. *s.* mouth ; *v.* mouth-folds ; *a.* anus ; *b.* Byssus-gland ; *h.* branchiæ ; *c.* cloak. See Plate D. Pillar 16.

99

*Pectan opercularis*, L. Scallop.

- i. *Pectan*, living state, natural size.
- ii. Animal only, the muscles being cut off, median part opened, showing the digestive tract. *See Plates A. and B. Pillar 18.*

100

*Vola Jacobæa*, L.

- i. Living state.
- ii. Animal only, muscles cut off. *m.* muscles; *k.* Branchiæ; *f.* mouth-folds.

107

*Sub-class B.*—Siphonida. (Animals having respiratory siphons, mantle-lobes more or less united).

*Cardium edule*, L. Cockle.

98

*Scrobicularia piperata*. L.

101

*Solen vagina*; razor shell.

102

*Tapes decussatus*. L.

103

*Venus gallina*. L.

104

*Venus gallina*. L.

*Anatomy.*—The brown liver partially omitted to show the digestive tract. *a.* œsophagus; *b.* stomach; *c.* the blind process containing the crystal-pedicle; *d.*, *e.* intestinum; *f.* ventricle; *g.* the two auricles; *h.* Bojanus gland; *i.* veins; *k.* arteries.

105



*Class II.*—PTEROPODA. The winged snails.

(Free and pelagic molluscs swimming by means of two wing-like processes on the upper part of their foot).

<i>Clio borealis</i> , Pallas.	106
<i>Clionopsis Krohnii</i> , Froschel.	108
<i>Cymbulia Peronii</i> . Cuo.	109
<i>Cymbulia quadripunctata</i> . Gegenbaur.	110
<i>Tiedemannia neapolitana</i> . V. Beneden.	111

*Class III.*—GASTEROPODA.

Molluscs swimming or creeping by the foot, but not by wing-like fins

*Sub-class A.*—Branchiata.

*Order I.*—Prosobranchiata.

*Section 1.*—Siphonostomata.

*Murex brandaris*. L. Whelk.

- i. Living state.
- ii. Animal only, cloak being opened showing the gills *g.* ; heart, *h.* ; purple gland *p.* ; *v.* proboscis.

161

*Section 2.*—Holostomata.

*Cerithium vulgatum*. Br.

- i. Living state.
- ii. The animal magnified, partially opened, showing the gills. *g.* ; *v.* ventricle ; *a.* auricle ; *s.* stomach ; *i.* intestine ; *m.* glandula mucosa ; *p.* penis ; *t.* testis.

162

<i>Turbo rugosus</i> . Lam. Top shell.	156
<i>Plaudina achatina</i> . Lam. River snail.	158

*Order 2.*—Opisthobranchiata. (Sea Slugs).

*Section 1.*—Tectibranchiata.

<i>Dolabrifera fusca</i> , Pease.	148
<i>Aplysia Inca</i> . D'Orbigny. Sea hare.	149
<i>Lobiger picta</i> . Pease.	151
<i>Pleurobranchus aurantiachus</i> , Cuvier.	152
<i>Pleurophyllida pallida</i> . Bergh.	153
<i>Syphonata punctata</i> . Pease.	154

*Section 2* —Nudibranchiata.

(The animals are shell-less.)

*Family 1.*—Pontoliamacidae.

<i>Pontolimax capitatus</i> . M.	112
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*Family 2.*—Elysiadae.

<i>Elysa chlorotica</i> . Ag.	113
<i>Plerogasteron nigropunctatus</i> . Pease.	114
<i>Placobranchus argus</i> .	115

## Family 3.—Aeolidæ.

<i>Aeolis papillosa.</i> L.	116
<i>Alderia Harvardiensis.</i> Ag.	117
<i>Cratena longibursa.</i> Bergh.	118
<i>Coryphella Bostoniensis.</i> Couthony.	119
<i>Embletonia fuscata.</i> Gould.	120
<i>Ercolania Pancerii.</i> Trinchese.	121
<i>Facelina coronata.</i> Forbes.	122
<i>Favorinus albus.</i> Alder and Hancock.	123
<i>Flabellina Newcombi.</i> Angas.	124
<i>Flabellina ornata.</i> Angas.	125
<i>Montaguia picta.</i> A. & H.	126
<i>Stiliger fuscatus.</i> Gould.	127
<i>Tergipes despectus.</i> Johnston.	128

## Family 4.—Glaucidæ.

<i>Glaucilla briareus.</i> Reinhardt.	129
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<i>Glaucus atlanticus.</i> Forster.	130
<i>Janus Sanguineus.</i> Angas.	136

Family 5.—Phyllirhoidæ.

<i>Cyerce elegans.</i> Bergh.	133
<i>Phyllobranchus orientalis.</i> Kelaart.	134

Family 6.—Tritoniadæ.

<i>Caecinella luctuosa.</i> Bergh.	131
<i>Bornella Hermannii.</i> Angas.	132
<i>Melibe fimbriata.</i> A. & H.	135
<i>Scyllaea marmorata.</i> A. & H.	138

Family 7.—Doridæ. Sea-lemons.

<i>Actinodoris australis.</i> Angas.	137
<i>Chromodoris festiva.</i> Angas.	139
<i>Doriopsis atromaculata.</i> Ald. & Han.	140
<i>Doriopsis gemmacea.</i> Ald. & Hanc.	141
<i>Doris arbutus.</i> Angas.	142

Doris fragilis. Ald. & Hanc.	143
Doris Concinna. Ald. & Hanc.	144
Goniodoris citrina. Ald. & Hanc.	145
Plocamophorus Ceylonicus. Kelaart.	146
Goniobranchus albomaculatus. Pease.	147
Triopa claviger. O. F. M.	150

*Order III.—Nucleobranchiata.*

Carinaria mediterranea. Lamarck.	174
Pterotrachea suclata. Gbr.	179

*Sub-class B.—Pulmonata or Pulmonifera.*

Air-breathing molluscs which include the land-snails, slugs, pond-snails, &c. They are usually provided with a well-developed shell.

*Section 1.—Operculata.*

Cyclostoma elegans, Drap.	155
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*Section 2.—Inoperculata.*

Limnaeus auricularius. Drap. Pond-snail.	159
Limnaeus palustris. Drap. Pond-snail.	167

*Amalia marginata.* Drap.

157

*Clausila bidens* Drap.

*a.* natural size ; *b.* anatomy—1. massa buccalis ; 2. oesophagus ; *c.* salivary glands ; 3. stomach ; 4. intestinum ; 5. hepar ; 6. gland ; hermaphroditica ; 7. gland albuminifera ; 8. oviduct ; 9. receptaculum seminis ; 10. gland, musco-sac ; 11. atrium ; 12. penis.

160

*Bulimus montanus.* Drap.

163

*Arion albus.* O. F. M.

164

*Helix arbustorum*, land snail.

165

*Arion empiricorum* ; Fer. Var. Ater. L.

166

*Arion empiricorum.*

Anatomy :—1. massa buccalis ; 2. oesophagus ; 3. glandulæ salivales ; 4. stomachus ; 5. intestinum ; 6. hepar ; 7. glandula hermaphroditica ; 8. glandula albuminifera ; 9. oviducts ; 10. receptaculum seminis ; 11. penis ; 12. atrium.

168

*Helix pomatia.* L.

Anatomy :—1. massa buccalis ; 2. oesophagus ; 3. glandulæ salivales ; 4. stomachus ; 5. hepar ; 6. intestinum ; 7. glandula hermaphroditica ; 8. ductus hermaphroditica ; 9. glandula albuminifera ; 10. oviducts ; 11. receptaculum seminis ; 12. glandulæ mucosæ ; 13. bursa tilæ ; 14. vas deferens ; 15. penis ; 16. flagellum ; 17. atrium.

169

*Limax agrestis.* L. slug. See Plates A. and B., Pillar Frames No. 22.

170

*Helix pomatia*. L. Land-snail. See Plate E., Pillar Frames  
No. 16, for its anatomy.

171

*Helix hortensis*. Land-snail. O. F. Müller.

172

*Limax arborum*, Bouch.-Chant. Slug.

173

*Vaginulus moreleti*, Fischer and Crosse.

175

*Parmacella Valenciennii*. M. T.

176

*Succinea amphibia*. Drap.

Anatomy:—*a.* the snail in living state; *b.* anatomy—  
1. massa buccalis; 2. glandulæ salivales; 3. œsophagus;  
4. stomach; 5. intestinum; 6. hepar; 7. glandula herma-  
phroditica; 8. ductus hermaphroditica; 9. glandula albu-  
minifera; 10. oviduct; 11. prostrata; 12. receptaculum  
seminis; 13. vas deferens; 14. penis.

177

#### *Class IV.—CEPHALOPODA.*

Highly organised molluscs comprising the cuttle-fishes,  
pearly nautilus, &c., having a large head and a muscular  
mantle enclosing the body with the fore-shortened foot  
around the head modified either into tentacles or sucker-  
bearing arms.

##### *Order 1.—Dibranchiata.*

##### *Section A.—Octopoda.*

(Cephalopods having eight arms provided with  
sessile suckers.)

##### *Family—Aragonantidæ.*

*Aragonauta Argo*. The Paper Sailor or the Paper Nautilus.

178

*Aragonauta Argo*. The Paper Sailor or the Paper Nautilus.

181



	31
Philonexis Carenæ.	195
Family—Octopodidæ (or Poulpes).	
Eledone moschatus. Leach.	180
Histioteuthis Bonelliana. Ferussac.	183
Octopus macropus. Risso.	187
Octopus vulgaris. Lamarek.	188
Tremoctopus violaceus. D. Ch.	200

*Section B.*—DECAPODA.

(Cephalopods having eight arms and two additional tentacles)

Squids or Calamaries.

Enoploteuthis Owenii, Verany.	182
Loligo vulgaris. Lamarek. See plates C., D., E., and F., Pillar Frames No. 22, for its anatomy.	184
Loligopsis veranii. Ferussac.	185
Loligopsis vermicularis. Rüpp.	186
Ommastrephes todarus. D. Ch.	189
Ommastrephes, Pillæ. Verany.	190



*Onychia platyptera*. D'Orbigny. 191

*Onychoteuthis Lichtensteini*. Fer. 192

Sepia or Cuttle-fish.

*Sepia officinalis*. L. 193

*Sepia officinalis*. L.

**Anatomy :—**All the membranes are omitted to afford a survey to the entire organization.

1. ventricle ; 2. auricle ; 3. branchiæ heart ; 4. aorta ;
5. veins ; 6. branchiæ ; 7. œsophagus ; 8. salivary glands ;
9. liver ; 10. stomach ; 11. blind process ; 12. ganglion splanchnicum ; 13. intestinum ; 14. anus ; 15. bag containing the black fluid ; 16. testis ; 17. vasdeferens ;
18. visicula seminalis ; 19. prostata ; 20. spermatothek ;
21. penis.

194

*Sepiula Rondeletii*. D. Chiaje. 196

*Sepiotenthis sicula*. Rüpp. 197

*Verania sicula*. Krohn. 198

*Rossia dispar*. Rüpp. 199

**Class 5.—TUNICATA (Sea-squirts or Ascidians).**

Soft-bodied marine animals of a whitish, pink, or brownish colour found attached to shells and stones among the tangles on sea shores.

**1. Simple Ascidians.**

*Boltenia Burkhardti*. Ag. 208

	33
<i>Ciona fascicularis.</i> Hanc.	202
<i>Corella</i> <sup>r</sup> <i>parallelogramma.</i> O. F. M.	203
<i>Cynthia pyriformis.</i> Rathke.	207
2.—Social ascidians.	
<i>Phallusia pustulosa.</i> Alder.	206
3.—Compound ascidians.	
<i>Botryllus bivittatus.</i> M. Edw.	204
<i>Amaroucium Nordmannii.</i> M. Edw.	205
<i>Pyrosoma atlanticum.</i> Sav.	
i. Colony (natural size).	
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4.—Salpiform ascidians.	
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<i>Salpa africana-maxima.</i> Forsk.	211
<i>Salpa aspera.</i> Cham.	212
<i>Salpa ferruginea.</i> Cham.	213
5.—Perennichordate ascidians.	
<i>Appendicularia cophocerca.</i> Gegenbaur.	201

## Sub-kingdom VII.

ARTHROPODA.—Crabs, lobsters, spiders, and insects which have bodies made up of successive segments, with a symmetrical nervous system, an external skeleton, chitinous, (like horn) or calcified (like chalk) and jointed limbs.

*Spiny Lobster (model).* Crustacea. Order—Decapoda. 1139,  
Long Case No. 10, Animal Kingdom No. III.

*Lobster and its anatomy.* Plates A. to D., Pillar Frames No. 20.

*Shoe-crab, house spider, &c.* Plates A. to D., Pillar Frames No. 32.

## DESK CASES Nos. XXVII to XXXII.

## CONCHOLOGY.—THE SCIENCE OF SHELLS.

*A Type Collection of Shells.*

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Murex brandaris. Medit. No. 4.	217
Columbella rustica. Medit. No. 5.	218
Mitra episcopalius. Madagascar. No. 6.	219
Fusus islandicus. Britain. No. 7.	220

<i>Nassa mutabilis.</i>	Medit.	No. 8.	221
<i>Purpura patula.</i>	California.	No. 9.	222
<i>Ricinula arachnoides.</i>		No. 10.	223
<i>Planaxis undulata.</i>	Australia.	No. 11.	224
<i>Harpa ventricosa.</i>	Mozambique.	No. 12.	225
<i>Oliva peruviana.</i>	W. C. America.	No. 13.	226
<i>Ancilla mauritiana.</i>	Zanzibar.	No. 14.	227
<i>Cassis pomum.</i>	Zanzibar.	No. 15.	228
<i>Dolium perdix.</i>	Zanzibar.	No. 16.	229
<i>Triton piliaris.</i>	Zanzibar.	No. 17.	230
<i>Ranella varicosa.</i>	Zanzibar.	No. 18.	231
<i>Pyrula melongena.</i>	Mazattan.	No. 19.	232
<i>Conus marmorcus.</i>	Molluccas.	No. 20.	233
<i>Pleurotoma tigrina.</i>	Molluccas.	No. 21.	234
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<i>Pileopsis hungaricus.</i> Britain. No. 37.	250



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<i>Terebratula caput-serpentis</i> . Britain. No. 68.	281
<i>Pecten opercularis</i> . Britain. No. 69.	282
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Tapes pullastra. Britain. No. 89.	302
Tellina radiata. Ceylon. No. 90.	303
Psammobin vespertina. Britain. No. 91.	304
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Donax Cayenensis. California. No. 93.	306
Solen siliqua. Britain. No. 94.	307
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## CONCHOLOGY.

### *A Type Collection of Shells from India and the Eastern Hemisphere.*

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Pigeon's Eggs. Jeypore.	494
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<i>Hydrochelidon hybrida.</i>	500
<i>Hydrochelidon melanogastra.</i>	501
<i>Coracias Indica.</i> Lin.	502
<i>Sarkidiornis melanonotus</i> , Pen. The Comb Duck. Loc.	503
<i>Metopodius Indicus</i> , Lath. The Bronz-winged Jacana. Loc.	504
<i>Butorides Javanica</i> , Horsf. The little Green Bittern. Loc.	505
<i>Bubulcus Coromandus</i> , Bodd. The Cattle Egret. Loc.	506
	507
<i>Ardea Purpurea</i> , Linn. The Blue Heron. Loc.	508
<i>Ardea Cinerea</i> , Linn. The Common Heron. Loc.	509
<i>Gallinula Chloropus</i> , Linn. The Moor Hen. Loc.	510



*Hydrophasianus Chirurgus*, Scop. The Pheasant-tailed  
Jacana. Loc.

511

*Passer Domesticus*, Linn. The Common House Sparrow.  
Loc.

512

*Petronia Flavicollis*, Frankl. The Yellow-throated Sparrow.  
Loc.

513

514

*Cotile Sinensis*, J. E. Gray. The Indian Bank Martin.  
Loc.

515

*Zosterops Palpebrosa*, Temm. The White-eyed Tit. Loc.  
516

*Lanius Vittatus*, Valenc. The Bay-backed Shrike. Loc.  
517

*Lanius Erythronotus*, Vigors. The Rufous-backed Shrike.  
Loc.  
518

*Pyrrhulanda Grisea*, Scop. The Black-bellied Finch Lark.  
Loc.  
519

*Caprimulgus Asiaticus*, Lath. The common Indian Night  
Jar. Loc.  
520

*Cypselus Affinis*, gray. The common Indian Swift. Loc.  
521

*Sturnia Pagodarum*, Gmel. The Black-headed Mynah.  
Loc.  
522

- Acridotheres Fuscus*, Tem. The Jungle Mynah. Loc. 523
- Acridotheres Tristis*, Lin. The Common Mynah. Loc. 524
- Sturnopastor Contra*, Lin. The Pied Mynah. Loc. 525
- Cotile Concolor*, Sykes. The Dusky Crag Martin. Loc. 526
- Amadina Malabarica*, Linn. The Plain Brown Munia. Loc. 527
- Turtur Suratensis*, Gmel. The Spotted Dove. Loc. 528
- Turtur Senegalensis*, Linn. The Little Brown Dove. Loc. 529
- Microperdix Erythrorhyncha*, Sykes. The Painted or Red-billed Bush Quail. Loc. 530
- Palæornis Rosa*, Bodd. The Western Rose-headed Paroquet. Loc. 531
- Palæornis Torquatus*, Bodd. The Rose-ringed Paroquet. Loc. 532
- Xantholæma Hæmacephala*, P. L. S. Mull. The Crimson-breasted Barbet. Loc. 533
- Centrococcyx Rufipennis*, Illigr. The common Coucal or Crow Pheasant. Loc. 534
- Tringa Cinclus*, Linn. The Dunlin. Loc. 535

*Lobivanellus Indicus*, Bod. The Red-wattled Lapwing or  
 "Did he do it." Loc.

536

*Merops Viridis*, Linn. The common Indian Green Bee-  
 eater.

537

*Galloperdix spadiceus*, Gmel. The Red-spur Fowl. Loc.

538

*Gallus Ferrugineus*, Gmel. The common jungle fowl. Loc.

539

*Pavo Cristatus*, Linn. The common peacock. Loc.

540

*Carine Brama*, Tem. The spotted owlet. Loc.

541

*Bubo coromandus*, Lath. The dusky-horned owl. Loc.

542

*Polioaëtus Ichthyaëtus*, Horsf. The Eastern White-tailed  
 Fish Eagle. Loc.

543

*Milvus Govinda*, Sykes. The large Pariah kite. Loc.

544

*Otogyps calvus*, scap. The black vulture. Loc.

545

*Siphia Tickellæ*, Bly. Tickell's Blue Red-breast. Loc.

546

*Rhipidura albifrontata*, sharpe. The white-browed Fantail.  
 Loc.

547

*Pericocotus peregrinus*, Lin. The small minivet. Loc.

548

- Buchanga Atra*, Herm. The common king crow. Loc. 549
- Oriolus kundoo*, Sykes. The Indian Oriole. Loc. 550
- Corone splendens*, Vieill. The common Indian crow. Loc. 551
- Pycnonotus Leucotis*, Gould. The white-eared Bulbul. Loc. 552
- Hypsipetes Psaroides*, Vig. The Himalayan black Bulbul. Loc. 553
- Ægithina Tiphia*, Lin. The common dwarf Bulbul. Loc. 554
- Myrmecocichla Fusca*, Blyth. The Indian Chat Robin. Loc. 555
- Sutoria sutoria*, Forst. The Indian Tailor Bird. Loc. 556
- Burnesia socialis*, Sykes. The dark-ashy wren warbler. Loc. 557
- Prinia Inornata*, Sykes. The Indian wren warbler. Loc. 558
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- Lanius lahtora*, Sykes. The Indian grey shrike. Loc. 560
- Pyctorhis sinensis*, Gmel. The yellow-eyed babbler. Loc. 561
- Crateropus canorus*, Linn. The Bengal babbler. Loc. 562

- Argya malcolmi*, Sykes. The large grey babbler. Loc. 563
- Thamnobia Cambaiensis*, Lath. The brown-backed Indian Robin. Loc. 564
- Copsychus saularis*, L. The Indian Magpie Robin. Loc. 565
- Ardetta sineusis*, Gmel. The little yellow bittern. Loc. 566
- Otocompsa emeria*, Lin. The Madras red-whiskered Bulbul. Loc. 567

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### WALL FRAME No. XXXIV.

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### FRAME No. XXXV.

Natural History Plate. Subject—Birds' nests arranged with reference to their form and substances used in their construction. No. 142. Bouasse Lebel. Paris. 568

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### WALL FRAME No. XXXVI.

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# FRAME No. XXXVII.

Natural History Plate. Subject—Eggs, chiefly of domestic, farm-yard and other European birds. No. 142. Bouasse Lebel. Paris.

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# FRAME No. XXXVIII.

Natural History Plate. Subject—Beaks and claws of birds. M. Cuvier's classification—

1. Rapacious birds (1-17),
2. Sparrows (18-69),
3. Climbers (70-84),
4. Gallinaceous birds (85-96),
5. Grallie (97-126), and
6. Web-footed birds (127-150).

570

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# FRAME No. XXXIX.

571

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# WALL FRAMES Nos. XL. to XLVI.

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## FRAME No. XLVII.

Natural History Plate. Subject—Articulated Animals, comprising annelides (leeches and other ringed worms); crustaceans (crabs and lobsters) and arachnida (spiders, scorpions, and allied animals). No. 156. Bouasse Lebel. Paris.

572

## WALL FRAME No. XLVIII.

## FRAME No. XLIX.

Natural History Plate. Subject—Zoophytes or the radiated animals, comprising Star-fish, Sea lilies, Sea urchins, &c., &c., forming a portion of the great division of the Animal Kingdom called the Invertebrata. No. 153. Bouasse Lebel.

573

## WALL FRAME No. L.

## FRAME No. LI.

Natural History Plate. Subject—Mollusca. Cuvier's classification—

1. Cephalopodes (cuttle fishes and the pearly nautilus),
2. Pteropodes (winged snails),
3. Gastropodes (whelk, sea-slugs, land and pond snails),
4. Acephales (molluscs without a distinct head),
5. Brachiopodes (lamp shells), and
6. Cirrhopodes (acron shells). No. 171. Bouasse Lebel.

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WALL FRAME No. LII.

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WALL FRAME No. LIII.

Natural History Plate. Subject—Conchology illustrating the classification of shells or envelopes of mollusca. Plate No. 92. Bouasse Lebel. Paris.

575

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WALL FRAME No. LIV.

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WALL FRAME No. LV.

Scientific Chart illustrating—

1. Phrenology or the Physiological hypothesis of Gall that the mental faculties and character are shown on the surface of the head ;
2. Physiognomy or the art of discovering the temper by the features of the face ; and
3. Chiromancy or palmistry. No. 182. Bouasse Lebel. Paris.

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WALL FRAMES No. LVI to LX.

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## WALL FRAME No. LXI.

Natural History Plate. Subject—Beetles classified with their Latin and French names. No. 95. Bouasse Lebel. Paris.

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## WALL FRAME No. LXII.

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## WALL FRAME No. LXIII.

Natural History Plate. Subject—Insecta.

Beetles (Coleoptera). They are remarkable for their hard polished integument, glittering metallic colours, and voracious habits. They are classified according to the number of the joints in the tarsi into four sections, *viz.*

1. Pentamera (soldier-beetles, glow worms, &c.),
2. Heteromera (blister-beetles),
3. Tetramera (the longicorn beetles and the weevils), and
4. Trimeria (lady birds).

Plate No. 187 by Bouasse Lebel, Paris.

578

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## WALL FRAME No. LXIV.

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## WALL FRAME No. LXV.

Elementary Entomological Plate, showing the description of the special conformation of each family of insects, and their classification as given by Cuvier. Plate No. 53, by Bouasse Lebel, Paris.

579

## NORTH-WEST GALLERY.

## WALL FRAME No. LXVI.

Natural History Card. Subject—Placental mammals. Order—Ungulata Ruminants,—the cow, the sheep and the ram. No. 115 by Emile Deyrolle & Cie. of Paris.

580

## WALL FRAME No. LXVII.

Natural History Card. Invertebrata. Sub-kingdom VII.

Arthropoda. Insects. (Diptera, Rhipiptera, Aptera, Myriapodes). No. 181 by Bouasse Lebel, Paris.

581

## WALL FRAME No. LXVIII.

Natural History Plate. Invertebrata. Sub-kingdom VII.

Arthropoda. Insects. (Orthoptera, Hemiptera, Neuroptera, Hymenoptera). No. 182 by Bouasse Lebel, Paris.

582



## WALL FRAME No. LXIX.

Natural History Card. Subject—Mammals. Order—Carnivora,—the wolf, the dog, and the fox. No. 113 by Emile Deyrolle, Paris.

583

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WALL FRAME No. LXX.

Natural History Card. Subject—Mammals. Order—Rodentia (gnawing animals). The hare, the rabbit and the squirrel. No. 114. Emile Deyrolle, Paris.

584

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WALL FRAME No. LXXI.

Natural History Card. Subject—Skeleton of a cock to illustrate the osteology of birds and an egg showing the different phases of incubation. No. 94. Emile Deyrolle, Paris.

585

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WALL FRAME No. LXXII.

Natural History Card. Animal Kingdom. Subject—Aves. Sub-class—Carinatæ. Order—Gallinæ. The cock, the hen, and the chickens belonging to the Pheasant family. They have generally naked spaces of skin on the head or cheeks and have combs or wattles. They are the inhabitants of the Old World, and are essentially Asiatic. No. 118. Emile Deyrolle, Paris.

586

## WALL FRAME No. LXXIII.

Natural History Plate. Subject—Bee-culture (Honey bee), illustrating the kinds of bees living in a hive (1-8); their physiology (9-17); their architecture (18-32); laying of eggs (33); eggs (34); larva (35-38); nymphs (39) hives, the necessary apparatus and all information regarding bee-culture. No. 51. Bouasse Lebel, Paris.

587

## WALL FRAME No. LXXIV.

Natural History Plate. Subject—Hymenopterous Insects (Honey bees) which produce the honey and the wax. No. 87. Emile Deyrolle, Paris.

588

Natural History Card. Subject—Insects injurious to man, animals and domestic economy. No. 86. Emile Deyrolle, Paris.

589

## WALL FRAME No. LXXV.

Natural History Card. Subject—Aves (birds). Sub-class—Carinatae. Order—Chenomorphae (anserines). The duck and the drake, their beak is flat and covered with a soft skin, the edges of the bill are fringed with a series of transverse plates which enable these birds to sift the mud for food. No. 119. Emile Deyrolle, Paris.

590

## WALL FRAME No. LXXVI.

Natural History Card. Subject—Insects injurious to fruit-trees. No. 84. Emile Deyrolle, Paris.

591

Natural History Card. Subject—Noxious Insects. The Colorado beetle, insect of the order Coleoptera; Parasite of the Potato; and the Phylloxera, insect of the order Hemiptera, the Vine Parasite. No. 82. Emile Deyrolle, Paris.

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### WALL FRAME No. LXXVII.

Natural History Card. Subject—Insects noxious to Corn crops and Culinary Plants. No. 85 by Emile Deyrolle, Paris.

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### WALL FRAME No. LXXVIII.

Natural History Card. Subject—Insects noxious to Forest and Avenue trees. No. 83 by Emile Deyrolle, Paris.

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### WALL FRAME No. LXXIX.

Natural History Chart, illustrating the animals and instruments which are the chief agents in the destruction of noxious animals and insects. No. 52 by Bouasse Lebel, Paris.

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### WALL FRAME No. LXXX.

Anatomical Diagram. Subject—Section of the human body with the nomenclature of the different organs of the thorax and abdomen and the structure of the skin. No. 109 by Emile Deyrolle, Paris.

596

Anatomical Diagram. Subject—Circulation of the blood in the human body illustrated by means of the chief organs connected with it. No. 110 by Emile Deyrolle, Paris.

597

## WALL FRAME No. LXXXI.

Natural History Plate. Insects. Caterpillars of the Lepidoptera or butterflies, classified under three heads. (Diurnal, Twilight and Nocturnal) with the names of the plants upon which they usually live and draw their nourishment. The caterpillars are vermiform in shape, and composed of thirteen segments, the first of which forms a distinct head with antennæ, jaws, and eyes. No. 175. Bouasse Lebel, Paris.

598

## WALL FRAME No. LXXXII.

Anatomical Diagram, illustrating the different parts of the human eye, the front view of the human body with all the organs of the thorax and abdomen, and the hand upon which are shown the veins and arteries. No. 112. Emile Deyrolle, Paris.

599

## WALL FRAME No. LXXXIII.

Anatomical Diagram giving a complete study of the human skeleton with the nomenclature of all the parts. Nos. 107. and 108. Emile Deyrolle, Paris.

600-1

## WALL FRAME No. LXXXIV.

Natural History Plate. Subject—Aves. Sub-class—Carnatae. Order—Passeres (Perchers). Family—Hirundinidae, the swallows ; Family Fringillidae, the sparrows ; and order—Columbæ, the pigeons. No. 129. Emile Deyrolle, Paris.

602

## WALL FRAME No. LXXXV.

Natural History Plate. Subject—Insects, Lepidoptera ( the butterfly collector ) illustrated and classified under three families. No. 93 by Bouasse Lebel, Paris.

603

## WALL FRAME No. LXXXVI.

Natural History Plate. Subject—Insects. Lepidoptera. Chrysalises and cocoons of butterflies. No. 177 by Bouasse Lebel, Paris.

604

## WALL FRAME No. LXXXVII.

*Beetles chiefly from India and the Eastern Hemisphere.*

Blepharipeza gonoseformis (Diptera), Rockhampton. No. 459.

605

<i>Musca domestica</i> (Diptera ), Queensland. No. 460.	606
<i>Zeleboria xanthorrhœa</i> , N. S. Wales. No. 461.	607
<i>Thynnus clypearis</i> , N. S. Wales. No. 462.	608
<i>Tasmanicus</i> , N. S. Wales. No. 463.	609
<i>Œcophylla smaragdina</i> , Queensland. No. 464	610
<i>Camponolus dimidiatus</i> , Sidney. No. 465.	611
<i>Sarcophaga assimilis</i> (Diptera ), Bowen. No. 466.	612
<i>Syrphus salvice</i> (Diptera ), Niti. No. 467.	613
<i>Sarcophaga</i> sp. Niti. No. 468.	614
<i>Lithurgus</i> sp. vic. <i>L. atruta</i> , Tuhiti. No. 469.	615
<i>Icaria Schmeltzii</i> , Bowen. No. 470.	616
<i>Pelopaens tahitienses</i> , Tahiti. No. 471.	617
<i>Rhynchium tahitense</i> . No. 472.	618
<i>Pterygophorus interruptus</i> , Sidney. No. 473.	619
<i>Anthophora cingulata</i> , Bowen. No. 474.	620



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Camponotus æneopilosus, Sidney. No. 475.	621
Camponotus intrepidus, Sidney. No. 476.	622
Hypoclinea glabra, Peak Downs. No. 477.	623
Cremastogaster Australis, Peak Downs. No. 478.	624
Camponotus Guerini, Queensland. No. 479.	625
Polyrhachis Guerini, Queensland. No. 480.	626
Myrmecia nigrocincta, Peak Downs. No. 481.	627
Hypoclinea purpurea, Queensland. No. 482.	628
Ectatomma scabrum, Rockhampton. No. 483.	629
Myrmecia tarsata, Peak Downs. No. 484.	630
Myrmecia forficata, Sidney. No. 485.	631
Hypoclinea gracilis, Peak Downs. No. 486.	632
Dasypogon carbo Diptera, Peak Downs. No. 487.	633
Laphria scapularis Diptera, Rockhampton. No. 488.	634
Tabanus, Niti. No. 489.	635

Eristalis, Niti. No. 490.

636

637

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### WALL FRAME No. LXXXIX.

Natural History Plate. Aves. Sub-class—Carinatae. The Passerine and the Picarian birds. The Passerine represented by the conirostres which have a conical beak and the Tenuirostres which have a long and slender tapering beak like various Picarian birds. The latter is represented by the common king-fisher which has a long, powerful, angular bill and short weak legs. The foot is of the "Syndactyle" type, the outer and middle toes being united along almost their entire length. No. 97. Emile Deyrolle.

639

Natural History Plate. Aves. Sub-class—Carinatae. Order Grallae (Plover and Barking Tatler). They are amphibious, and have long legs. The toes are long and slender and mostly free. *Order*—Web-footed. The laughing gull and duck and *order* Gallinacea (the quail and the turtle dove). No. 98. Emile Deyrolle. Paris.

640

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### WALL FRAME No. XC.

Natural History Plate. Insects, Lepidoptera (Butterflies). Their structure and organs. No. 184 by Bouasse Lebel. Paris.

641

## WALL FRAME No. XCI.

Natural History Plate. Insects. Lepidoptera Butterflies.  
No. 178. Bouasse Lebel, Paris.

642

## WALL FRAME No. XCII.

Natural History Plate. Aves. Useful birds. Order—  
Raptores (birds of prey) owl and kestrel. They have  
strong hooked bills and sharp curved claws. Order—  
Climbers (Picarian birds) wry-neck, wood-pecker and  
cuckoo. No. 95. Emile Deyrolle. Paris.

643

Natural History Plate. Useful birds. Insectivora. Order—  
Passers or perchers. They have short and slender legs,  
and the form of the foot is adapted for perching. Two  
types of beaks are illustrated :—

1. Fissirostres, in which the beak is short with a wide  
gape, its sides often protected by bristles :
2. Dentiostres, in which there is a distinct notch near the  
tip of the upper mandible.

No. 96. Emile Deyrolle, Paris.

644

## WALL FRAME No. XCIII.

Natural History Plate. The Reptiles and Fishes. No. 159.  
Bouasse Lebel, Paris

645

## WALL FRAME No. XCIV.

Natural History Plate. The teeth of reptiles and fishes and the mouths of all classes of animals by which they draw, attack, seize, and retain the prey which forms their nourishment. No. 167. Bouasse Lebel, Paris.

646

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WALL FRAME No. XCV.
*Beetles (Orthoptera).*

*Libellula sabina* (orthoptera), Ovalan. No. 381.

647

*Rhyothemis graphiptera* (orthoptera), Queensland. No. 382.

648

*Zyxomma tillarga* (orthoptera), S. Sea Island. No. 383.

649

*Diplax bipunctata* (orthoptera), Hualime. No. 384.

650

*Agrionoptera pectoralis*. No. 385.

651

*Diplax trivialis* (orthoptera), Bowen. No. 386.

652

*Neurothemis fluctuans* (orthoptera), Pelew. No. 387.

653

*Formicaleo striola*, Queensland. No. 388.

654

*Chrysopa signata*, Queensland. No. 389.

655

	75
<i>Libellula caelestis</i> (orthoptera), Bowen. No. 390.	656
<i>Lestes Leda</i> (orthoptera), Rockhampton. No. 391.	657
<i>Rantala flavescens</i> (orthoptera), S. Sea Island. No. 392.	658
<i>Ascalaphus subtracheus</i> , Australia. No. 393.	659
<i>Diplax Nœmatodes</i> (orthoptera). No. 394.	660
<i>Agrionoptera pacifica</i> , Mioko. No. 395.	661
<i>Libellula vellosavittata</i> (orthoptera), Bowen. No. 396.	662
<i>Phylalosonia novæ-britanniæ</i> , Niti. No. 397.	663
<i>Acrophilla tessellata</i> , Queensland. No. 398.	664
<i>Acridium melanocorne</i> , Samoa. No. 399.	665
<i>Tropidonotus cinnamomeus</i> , Queensland. No. 400.	666
<i>Coryphistes sordidus</i> , Rarotonga. No. 401.	667
<i>Acridium cuspidatum</i> , Samoa. No. 402.	668
<i>Oxya velox</i> , Bowen. No. 403.	669
<i>Phaneroptera linearis</i> , Queensland. No. 404.	670

<i>Pachytylus cinerascens</i> , Queensland. No. 405.	671
<i>Acridium maculatum</i> , Bowen. No. 406.	672
<i>Xiphidium modestum</i> , Ovalan. No. 407.	673
<i>Ranatra</i> sp. Hemiptera, Queensland. No. 408.	674
<i>Conocephalus gracilis</i> , Yap. No. 409.	675
<i>Monachidium quadrigibbum</i> , Queensland. No. 410.	676
<i>Platydictylus flavo-variegatus</i> , Upolu. No. 411.	677
<i>Gryllus modestus</i> , Upolu. No. 412.	678
<i>Nestrea Godeffroyi</i> , Navao. No. 413.	679

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## WALL FRAME No. XCVI.

*Beetles chiefly from India and the Eastern  
Hemisphere.*

### HEMIPTERA.

<i>Cosmopsaltria linifera</i> , Ovalan. No. 414.	680
<i>Mictis profanus</i> , Samoa. No. 415.	681



	77
Anisocelis Australis, Samoa. No. 416.	682
Lamprophana bifasciata, Samoa. No. 417.	683
Ptatynepus melacanthus, Samoa. No. 418.	684
Tectocoris cyanipes, Queensland. No. 419.	685
Pœcilometis patruelis, Queensland. No. 420.	686
Havithus longiceps, Queensland. No. 421.	687
Dysdercus Kœnigi, Ovalan. No. 422.	688
Pristhesaneus papnensis, Queensland. No. 423.	689
Megymenum cupreum, Rockhampton. No. 424.	690
Stilida indecora, Rockhampton. No. 425.	691
Nepa tristis, Queensland. No. 426.	692
Ptatypleura Mormorata, Pelew. No. 427.	693
Chrysogaster niger? Peru. No. 428.	694

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## HYMENOPTERA.

<i>Pheidole oceanica</i> , Upolu. No. 429.	695
<i>Tetramorium Guineense</i> , Ovalan. No. 430.	696
<i>Evania appendigaster</i> , Ovalan. No. 431.	697
Hymenoptera. No. 432.	698
<i>Rhynchium rufipes</i> , Tahiti. No. 433.	699
<i>Discotia ovalana</i> , Ovalan. No. 434.	700
No. 435.	701
<i>Myrmecia gulosa</i> , N. S. Wales. No. 436.	702
<i>Bothroponera piliventris</i> , Queensland. No. 437.	703
<i>Odontomachus hæmatodes</i> , Samoa. No. 438.	704
<i>Icaria Cabetii</i> var, Queensland. No. 439.	705
<i>Stilbum</i> sp. Queensland. No. 440.	706
<i>Brann</i> sp. Niti. No. 441.	707

	79
Camponotus dorycus, Sidney. No. 442.	708
Sphex carbonaria, Queensland. No. 443.	709
Pelopeus laetus, Queensland. No. 444.	710
Pompilus tuberculatus. No. 445.	711
Hymenoptera, N. Britain. No. 446.	712
Hymenoptera, N. Britain. No. 447.	713
Hymenoptera. No. 448.	714
Icaria revolutionalis, Queensland. No. 449.	715
Polistes synæcus, Savay. No. 450.	716
Hymenoptera. No. 451.	717
Odynerus bicolor, Queensland. No. 452.	718
Icaria gregaria, Queensland. No. 453.	719
Discolia verticalis, Queensland. No. 454.	720
Pimpla sp. Queensland. No. 455.	721
Polistes Numilis, Queensland. No. 456.	722

*Thynnus apterus*, N. S. Wales. No. 457. 723

*Cosila biguttata*, Queensland. No. 458. 724

## WALL FRAME No. XCVII.

### *Butterflies from India.*

*Minetia gambrisius*. No. 347. 725

*Papilio dissimilis*. No. 348. 726

*Symphædia cyanipardus*. No. 349. 727

*Symphædia dirtea*. No. 350. 728

*Charaxes polyxena* var. No. 351. 729

*Dichorragia nesimachus*. No. 352. 730

*Stibochiona nicea*. No. 353. 731

*Symphaecia nais*. No. 354. 732

*Adolias garuda*. No. 355-6. 733-4

*Symbrenthia hippoclus*. No. 357. 735

*Colias Fieldii*. No. 358-9. 736-7

	81
Colias Erate. No 360.	738
Pieris Lalage. No. 361.	739
Melanitis Leda. No. 362.	740
Discophora celinde. No. 363.	741
Lycœna boetica. No. 364.	742
Lycœna rosimon. No. 365.	743
Lilythea Lepita. No. 366.	744
Lethe Europa. No. 367.	745
Zemeros fleygas. No. 368.	746

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## WALL FRAME No. XCVIII.

*Butterflies and Beetles chiefly from India and the  
Eastern Hemisphere.*

Amlylopodia centaurus. No. 369.	747
Ypthima newara. No. 370.	748
Junonia laomedea. No. 371.	749

<i>Clerome arcesilaus.</i> No. 372.	750
<i>Athyma inarina.</i> No. 373.	751
<i>Vanessa charonia.</i> No. 374.	752
<i>Messarar erymanthis.</i> No. 375.	753
<i>Athyma perius.</i> No. 376.	754
<i>Charaxes athamas.</i> No. 377.	755
<i>Adolias lepida.</i> No. 378.	756
<i>Adolias evelina.</i> No. 379.	757
<i>Callidrya crocale.</i> No. 380. Nos. 274 to 380. All Indian. "Neuroptera," &c.	758
<i>Lagoptera magica</i> , Niti. No. 491.	759
<i>Sphinx Convolvuli</i> , Niti. No. 492.	760
<i>Chærocampa celerio</i> , Niti. No. 493.	761
<i>Cocytoides cœrulea</i> , Samoa. No. 494.	762
<i>Chærocampa erobus</i> , Samoa. No. 495.	763
<i>Remigia Mayeri</i> , Samoa. No. 496.	764



Danaïs archippus, Samoa. No. 497.	83
Achæa melicerta, Queensland. No. 498.	765
Danaïs hamata, Queensland. No. 499.	766
	767

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## WALL FRAME No. XCIX.

### *Butterflies from India.*

Chærocampa. No. 302.	768
Eterusea sp. No. 303.	769
No. 304.	770
Macroglossa Hylas. No. 305.	771
Deiopeia pulchella. No. 306.	772
Hespena folas. No. 307.	773
Hespena sp. No. 308.	774
Aygnnis Lathonia. No. 309.	775
Aygnnis childreni. No. 310.	776
Aygnnis niphe. Nos. 311-2.	777-8

<i>Cinchocha aoris.</i> No. 313.	779
<i>Cynthia deione.</i> No. 314.	780
<i>Papilio Jason.</i> No. 315.	781
<i>Cyrestis thyodamus.</i> No. 316.	782
<i>Parantica aglea.</i> No. 317.	783
<i>Chittira melaneus.</i> No. 318.	784
<i>Timmala septentriones.</i> No. 319.	785
<i>Tyraneis cardui.</i> No. 320.	786
<i>Tyraneis indica.</i> No. 321.	787
<i>Vanessa Kashmirensis.</i> No. 322.	788
<i>Precis ida.</i> No. 323.	789
<i>Elymnias undularis.</i> No. 324.	790
<i>Elymnias leucocyma.</i> No. 325.	791
<i>Hestina nama.</i> No. 326.	792

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## WALL FRAME No. C.

*Butterflies from India.*

Kallima inachis. No. 327.	793
Adolias doubledayii. No. 328.	794
Pieris phryne. No. 329.	795
Acroea vesta. No. 330.	796
Adolias keuta. No. 331.	797
Limentis procris. No. 332.	798
Adolias appiades. No. 333.	799
Ducas vechnelli. No. 334.	800
Ixias pyrere. No. 335.	801
Eronia valeria. No. 336.	802
Pieris nama. No. 337.	803
Delias encharis. No. 338.	804
Delias antonoe. No. 339.	805

Prioneris demanthe. No. 340.	806
Pieris messentina. No. 341.	807
Callidryas. No. 342.	808
Sonepteryx nipalensis. Nos. 343-4.	809-10
Terias hecabe. No. 345.	811
Terias loeta. No. 346.	812

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## WALL FRAME No. CI.

### *Butterflies from India.*

Papilio castor. No. 274.	813
Papilio Protenor. No. 275.	814
Papilio Rhetenor. No. 276.	815
Papilio Memnon. Nos. 277-8.	816-7
Papilio Helenus. No. 279.	818
Papilio Astorion. No. 280.	819
Papilio Xenocles. No. 281.	820

Papilio Antiphates. No. 282.	87
Papilio Polymnestor. No. 283.	821
Papilio Paris. No. 284.	822
Papilio Ganesa. No. 285.	823
Papilio Aristolochia. No. 286.	824
	825

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## WALL FRAME No. CII.

### *Butterflies from India.*

Papilio Dasarada. No. 287.	826
Papilio Sarpedon. No. 288.	827
Papilio Polycctor. No. 289.	828
Papilio Hector. Nos. 290-1.	829-30
Attacus Ricini. No. 292.	831
Antherea Mylitta. No. 293.	832
Attacus atlas. No. 294.	833

Actias selene. No. 295.	834
Hestea Jasonia. No. 296.	835
Euchesmia sp. No. 297.	836
Ophiodes tyrannusvai. No. 298.	837
Ophiodes fullonia. No. 299.	838
Epygris venaria. No. 300.	839
Euschemia militaris. No. 301.	840

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### WALL FRAME No. CIII.

#### *Butterflies from India and the Eastern Hemisphere.*

Hypolimnas misippus, India and Africa. Nos. 210-11.	841-2
Limnas chrysippus, India and Africa. No. 212.	843
Euploea rhadamanthus, China. No. 213.	844
Junonia lemonias, India. No. 214.	845
Limentis sulema, N. India. No. 215.	846
Pyrameis cardui, Cosmopolitan. Nos. 216-7.	847-8



*Junonia cœnone* Linn = *Junonia cleba crama*, Africa. Nos.  
218-9.

849-50

*Argynnis cybele*, N. America. No. 220.

851

*Tachyris agathina*, Africa. Nos, 221-2.

852-3

*Thais cerisyi*, Europe. Nos. 223-4.

854-5

*Junonia hierta*, Africa, India. No 225.

856

*Vieris eleone*, S. America. No. 226.

857

*Daptonoma* sp., S. America. No. 227.

858

*Athyma selenophora*, N. India. No. 228.

859

*Hypolimnas bolina*, N. India. No. 229.

860

*Junonia Orithya*, N. India. No. 230.

861

*Acroea nohara*, S. Africa = Nos. 218-9. Nos. 231-2.

862-3

*Precis ceryne*, S. Africa. No. 233.

864

*Byblia ilithya*, Africa, India. No. 234.

865

*Papilio demetrius*. No. 235.

866

*Papilio hector*, India. Nos. 236-7. 867-8

*Urania rypheus*, Madagascar. No. 238. 869

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WALL FRAME No. CIV.

*Butterflies from India and the Eastern Hemisphere.*

*Hypolimnias bolina*, India. Nos. 239-40. 870-1

*Ithomia* sp., S. America. No. 241. 872

*Ithomia Zavaletta*, S. America. No. 242. 873

*Dircenna* sp., S. America. No. 243. 874

*Heliconia charithonia*, S. America. No. 244. 875

*Papilio Pammon*, India. Nos. 245-6. 876-7

*Papilio Eirthonin*, India. Nos. 247-8. 878-9

*Tirumala limniace*, India. Nos. 249-50. 880-1

*Dilias eucharis*, India. Nos. 251-2. 882-3

*Callidryas hilana* = *Catilla*, India. Nos. 253-4. 884-5

*Terias hecabe*, India. No. 255. 886

	91
<i>Heliconia clytia</i> , S. America. No. 256.	887
<i>Heliconia melpomere</i> , S. America. No. 257.	888
<i>Athyma coma</i> , N. India. No. 258.	889
<i>Timetes Corinna</i> , S. America. Nos. 259-60.	890-1
<i>Callidryas embuli</i> , S. America. Nos. 261-2.	892-3
<i>Platysamia Cecropii</i> , N. America. No. 263.	894
<i>Antherea mylitta</i> , N. India. Nos. 264-5.	895-6
<i>Vynbopygi</i> sp., S. America. No. 266.	897
<i>Lethe Europa</i> , N. India. No. 267.	898
<i>Lethe Europa</i> , N. India. No. 268.	899
<i>Macrylossa stellatarum</i> , Europe. No. 269.	900
<i>Telea Promethea</i> , N. America. No. 270.	901
<i>Nebomia glaucippe</i> , India. Nos. 271-2.	902-3
<i>Atella phalanta</i> . No. 273.	904

## WALL FRAME No. CV.

*Butterflies chiefly from India and the  
Eastern Hemisphere.*

Odontolabis Siva, Assam. No. 126.	905
Sternocera unicolor. No. 127.	906
Sternocera laevigata. No. 128.	907
Chrysochroa fulminans. No. 129.	908
Lampelis fastuosa. No. 130.	909
Chrysochroa ocellata. No. 131.	910
Campsosternus bohemanni, Ceylon. No. 132.	911
Batocera rubus. No. 133.	912
Catoxantha opulentus. No. 134.	913
Dynastes iphielus. No. 135.	914
Agestrata chinensis. No. 136.	915
Chiloba acuta. No. 137.	916

*Aspidomorpha sancta crucis* from Elephanta near Bombay.  
No. 138.

917

*Anomola* sp. No. 139.

918

*Melanaustes chinensis*. No. 140.

919

*Rhomborrhina apicalis*. No. 141.

920

*Sternocera chrysis*. No. 142.

921

*Euryomia versicolor*. No. 143.

922

*Anomala* sp. No. 144.

923

*Psiloptera crassicollis*. No. 145.

924

*Clinteria chloronota*. No. 146.

925

*Chrysomela* sp. No. 147.

926

*Pheropsophus* sp. No. 148.

927

*Harpalus*? No. 149.

928

*Omphra* sp. No. 150.

929

*Platynotus excavatus*. No. 151.

930

One of the *Blatticlæ*. No. 152.

931

<i>Anthia sexguttata.</i> No. 153.	932
<i>Callidroma vittata.</i> No. 154.	933
<i>Sagra</i> sp. No. 155.	934
<i>Phyllopertha hirtella.</i> No. 156.	935
<i>Colosposoma</i> sp. No. 157.	936
<i>Anlacocheilus</i> sp. No. 158.	937
<i>Serica</i> sp. No. 159.	938
<i>Mylabus</i> sp. No. 160.	939
No. 143. No. 161.	940
<i>Eumolpus</i> sp. No. 162.	941
No. 113. No. 163.	942
<i>Xystrocera festiva.</i> No. 164.	943
<i>Popilia</i> sp. No. 165.	944
<i>Helota oberthurii.</i> No. 166.	945
<i>Erythrus fortuneii.</i> No. 167.	946



	95
<i>Eupatorus hardwickii</i> . No. 168.	947
<i>Ludius</i> sp. No. 169.	948
<i>Rhyncophorus sexmaculata</i> . No. 170.	949
<i>Anomala</i> sp. No. 171.	950
<i>Cantharis melanurus</i> . No. 172.	951
<i>Lepidiota brinaculata</i> . No. 173.	952
<i>Cyrtotrachelus dux</i> . No. 174.	953
<i>Nimantocera penicillata</i> . No. 175.	954
<i>Mesosa</i> sp. No. 176.	955
<i>Belionota prasinana</i> . No. 177.	956
<i>Emylatus formosus</i> . No. 178.	957
<i>Hierodula</i> sp. No. 179.	958

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## WALL FRAME No. CVI.

*Beetles and Butterflies chiefly from India and the  
Eastern Hemisphere.*

Mantis. No. 180.	959
Fidicina atrata. No. 181.	960
Dundubia obtesta. No. 182.	961
Platyperus phalenoides. No. 183.	962
Cercopis megamera. No. 184.	963
Callidea baro. No. 185.	964
Dundubia sp. No. 186.	965
Dorcus dehaani. No. 187.	966
Batocera rubus, var. No. 188.	967
Apriona germauii. No. 189.	968
Aphœnas atomalis. No. 190.	969
Scorpio fulvipes. No. 191.	970

	97
<i>Pseudophyllus siccus</i> . No. 192.	
	971
<i>Chrysochroa chinensis</i> . No. 193.	
	972
<i>Tosena melanoptera</i> . No. 194	
	973
<i>Polynœura ducalis</i> . No. 195.	
	974
<i>Gæna sulphurea</i> . No. 196.	
	975
<i>Hotinus candelarius</i> . No. 197.	
	976
<i>Euplœa superba</i> , China. No 198.	
	977
<i>Euplœa midamus</i> , China. No. 199.	
	978
<i>Lethosia cyane</i> , India. No. 200.	
	979
<i>Papilio cloanthus</i> , N. India. No. 201.	
	980
<i>Papilio eurypilus</i> , China. No. 202.	
	981
<i>Papilio sarpedon</i> , China. No. 203.	
	982
<i>Papilio demoleus</i> , Africa. No. 204.	
	983
<i>Limentis danava</i> , N. India. No. 205.	
	984
<i>Hypolimnas antigone</i> , Australia. No. 206.	
	985

Callidryas argente, S. America. No. 207.	986
Callidryas philea, S. America. No. 208.	987
Elymnias undularis, O. India. No. 209.	988

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### WALL FRAME No. CVII.

#### *Beetles chiefly from India & the Eastern Hemisphere.*

Polyzosteria linabata ( orthoptera ), Sidney. No. 1.	989
Dineutes, n. sp., Niti. No. 2.	990
Figulus foveicollis, Niti. No. 3.	991
Photophorus Jansonii, Niti-Levu. No. 4.	992
Simodactylus cinnamomeus, Niti. No. 5.	993
Bradymerus amicorum, Niti. No. 6.	994
Bostrychus sp., S. Sea Island. No. 7.	995
Anoplognathus Jopus, Sidney. No. 8.	996
Eupoecila punctata, Bowen. No. 9.	997

	99
<i>Stigmodera macularia</i> , Sidney. No. 10.	998
<i>Catasarcus rufipes</i> , West Australia. No. 11.	999
<i>Chalcophora flaviventris</i> , Niti. No. 12.	1000
<i>Panagaeus Australis</i> , Brisbane. No. 13.	1001
<i>Colymbetes Australis</i> , Niti. No. 14.	1002
<i>Aciluis?</i> sp., Brisbane. No. 15.	1003
<i>Emus erythrocephalus</i> , Brisbane. No. 16.	1004
<i>Glycyphana brunnipes</i> , Sidney. No. 17.	1005
<i>Liparetrus erythropterus</i> , Queensland. No. 18.	1006
<i>Figulus striatus</i> , Brisbane. No. 19.	1007
<i>Mastochilus polyphyllus</i> , Palau. No. 20.	1008
<i>Porrostoma erythropterum</i> , Queensland. No. 21.	1009
<i>Iphthynus crenatus</i> , Sidney. No. 22.	1010
<i>Promethis Pascoei</i> , Queensland. No. 23.	1011
<i>Omolipus gnesioides</i> , Queensland. No. 24.	1012

<i>Uloma australis</i> , Queensland. No. 25.	1013
<i>Diphyrhynchus chaldeus</i> , Niti. No. 26.	1014
<i>Episcapha australis</i> , Queensland. No. 27.	1015
<i>Amarygmus convexus</i> , Queensland. No. 28.	1016
<i>Sphenophorus obscurus</i> , Samoa. No. 29.	1017
<i>Elytrurus appendiculatus</i> , Tonga. No. 30.	1018
<i>Acicnemis variegatus</i> , Ovalau. No. 31.	1019
<i>Panesthia Javanica</i> ( orthoptera ), Brisbane. No. 32.	1020
<i>Polyzosteria marginata</i> ( orthoptera ), Upolu. No. 33.	1021
<i>Periplaneta Americana</i> ( orthoptera ), New Holland. No. 34.	1022
<i>Mictis profanus</i> ( hemiptera ), Samoa. No. 35.	1023
<i>Alydus annulicornis</i> ( hemiptera ), Samoa. No. 36.	1024
<i>Dysdercus Roenigi</i> ( hemiptera ), Queensland. No. 37.	1025
<i>Brachyplatys Vanicorensis</i> ( hemiptera ), Queensland. No. 38.	1026



	101
<i>Polyzosteria nitida</i> ( orthoptera ), Rockhampton. No. 39.	1027
<i>Trogus tripunctatus</i> , Queensland. No. 40.	1028
<i>Eunectes australis</i> , Queensland. No. 41.	1029
<i>Enhydrus oblongus</i> , Queensland. No. 42.	1030
<i>Phylhydrus melancephalus</i> , Queensland. No. 43.	1031
<i>Cercion</i> ? Queensland. No. 44.	1032
<i>Necterosoma Wallastoni</i> , Queensland. No. 45.	1033
<i>Figulus liliputanus</i> , Niti. No. 46.	1034
<i>Onthophagus atrox</i> , Queensland. No. 47.	1035
<i>Onthophagus consentaneus</i> , Queensland. No. 48.	1036
<i>Cyphogastra pistor</i> , Queensland. No. 49.	1037
<i>Eleale lepida</i> , Queensland. No. 50.	1038
<i>Cerambyrbynchus Schonhovei</i> , Niti. No. 51.	1039
<i>Hygrotophus nutans</i> , Queensland. No. 52.	1040

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## WALL FRAME No. CVIII.

*Beetles chiefly from India & the Eastern Hemisphere.*

Cephalodesmius Mc Leayi, Queensland. No. 53.	1041
Cephalodesmius nodulifer, Queensland. No. 54.	1042
Epilampra gracilis, Sidney. No. 55.	1043
Alydus sp. (hemiptera), Queensland. No. 56.	1044
Iphthimus canaliculatus, Pelew. No. 57.	1045
Cicindela Ypsilon, Queensland. No. 58.	1046
Platymetopus sp., Huahine. No. 59.	1047
Dicrochile Goryi, Gayndah. No. 60.	1048
Repsimus manicatus, Sidney. No. 61.	1049
Phyllotocus ruficollis, Sidney. No. 62.	1050
Lamprima Latreillii, Sidney. No. 63.	1051
Conognatha undulata, N. S. Wales. No. 64.	1052

	103
<i>Conognatha plagiata</i> , N. S. Wales. No. 65.	1053
<i>Conognatha Australasiæ</i> , N. S. Wales. No. 66.	1054
<i>Catastygus scutellaris</i> , Queensland. No. 67.	1055
<i>Phyllodromia spuria</i> ( orthoptera ), Sidney. No. 68.	1056
<i>Polyzosteria castanea</i> ( orthoptera ), Sidney. No. 69.	1057
<i>Epilampra inguinata</i> ( orthoptera ), Sidney. No. 70.	1058
<i>Oniscosoma pallida</i> ( orthoptera ), Sidney. No. 71.	1059
<i>Oniscosoma castanea</i> ( orthoptera ), Sidney. No. 72.	1060
<i>Xantholinus cervinipennis</i> , Gayndah. No. 73.	1061
<i>Cisseis</i> sp., Sidney. No. 74.	1062
<i>Ethon</i> n. sp., Peak Downs. No. 75.	1063
<i>Agrilus mastersii</i> , Peak Downs. No. 76.	1064
<i>Agrilus mastersii</i> var, Gayndah. No. 77.	1065
<i>Diacanthus</i> ? Sidney. No. 78.	1066
<i>Nacerdes</i> sp., Society Islands. No. 79.	1067

<i>Homotrysis subgenunatus</i> , Gayndah. No. 80.	1068
<i>Amarygmus opacicollis</i> , Queensland. No. 81.	1069
<i>Amarygmns foveolatus</i> , Gayndah. No. 82.	1070
<i>Atryphodes Walckenaeri</i> , Sidney. No. 83.	1071
<i>Adelium geniale</i> , Sidney. No. 84.	1072
<i>Adelium nosodendroides</i> , Rockhampton. No. 85.	1073
G.? <i>Aff. Otiorhynchus</i> , Peak Downs. No. 86.	1074
<i>Bryactrus squamicollis</i> , Peak Downs. No. 87.	1075
<i>Arionychus insignis</i> , Peak Downs. No. 88.	1076
<i>Amycterus paradoxus</i> , Queensland. No. 89.	1077
<i>Callirrhapis cylindroides</i> , Niti. No. 90.	1078
<i>Rhynchophorus velutinus</i> , Duke of York. No. 91.	1079
<i>Sipalus granulatus</i> , Duke of York. No. 92.	1080
<i>Rhinoscapa Schmeltzi</i> , Duke of York. No. 93.	1081
<i>Cyphogastra Muieszechii</i> , Duke of York. No. 94.	1082

	105
Tricondyla aptera, Duke of York. No. 95.	1083
Monohammus sp., Duke of York. No. 96.	1084
Therates labiata, Duke of York. No. 97.	1085
Eurytrachelus Thomsoni, Duke of York. No. 98.	1086
Cladognathus Bison, Duke of York. No. 99.	1087
Amarygmus foveoseriatus, Duke of York. No. 100.	1088
Botanoctona pallidecineta, Duke of York. No. 101.	1089
Glenea viridinetata, Duke of York. No. 102.	1090
Oxycephala tripartita, Duke of York. No. 103.	1091
Aspidomorpha socia, Duke of York. No. 104.	1092
Mecistocerus ocellatolineatus, Niti. No. 105.	1093
Pimelopus Hübneri, Duke of York. No. 106.	1094
Eupholus Browni, Duke of York. No. 107.	1095
Pachyrhynchus biplagiatus, N. Britain. No. 108.	1096
Chrysocoris quadrimaculatus, Miako. No. 109.	1097

<i>Ageranis cantori</i> , Assam. No. 110.	1098
<i>Cyphochilus candidum</i> , Assam. No. 111.	1099
<i>Mecotagus guerinii</i> , Assam. No. 112.	1100
<i>Coryphocerus læta</i> , Assam. No. 113.	1101
<i>Morimus morimoides</i> , Assam. No. 114.	1102
<i>Brosicus</i> sp., Assam. No. 115.	1103
<i>Callichroma nympa</i> , Assam. No. 116.	1104
<i>Rhomborrhina hyacintha</i> , Assam. No. 117.	1105
<i>Epepeotes guttatus</i> ? Assam. No. 118.	1106
<i>Heterorhina saundersii</i> , Assam. No. 119.	1107
<i>Odontalabis burmeisterii</i> , Assam. No. 120.	1108
<i>Xylotrupes gideon</i> , Assam. No. 121.	1109
<i>Trichogomphus martabani</i> , Assam. No. 122.	1110
<i>Cerosterna reticulata</i> , Assam. No. 123.	1111
<i>Mimela confusius</i> , Assam. No. 124.	1112



*Cladnogathus spencerii*? Assam. No. 125.

1113

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### WALL FRAME No. CIX.

Natural History Plate. Subject—Invertebrata. Mollusca  
and Radiata. No. 90 by Emile Deyrolle, Paris.

1114

Natural History Plate. Subject—Invertebrata. Crustaceans  
and Spiders. No. 91 by Emile Deyrolle, Paris.

1115

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### ANIMAL KINGDOM No. III.

#### LONG CASE No. CX.

Sponges, Jelly fishes, and Sea Anemones (Nos. 1116-38)  
comprised within the Invertebrate Division of the Animal  
Kingdom.

*Aegina rosea*. Eschscholz. No. 130.

1116

*Bougainvillea superciliaris*. Agassiz. No. 137.

1117

*Tetranema aeronauticum*, F. No. 145.

1118

*Lizzia octopunctata*. Forbes. No. 164.

1119

*Modeeria formosa*. Forbes. No. 166.

1120

*Oceania phosphorica*. Péron. No. 169.

1121

Slabberia halterata. Forbes. No. 179.	1122
Willia stellata. Forbes. No. 195.	1123
Beroë punctata. Chamisso. No. 241.	1124
Turris digitalis. Forbes. No. 193.	1125
Sycandra raphanus. O. S. No. 647 <i>a</i> , Amphiblastula stage $\frac{000}{1}$ .	1126
Rhizostoma pulmo. L. No. 238.	1127
Sarsia siphonophora. No. 657.	1128
Aequorea cyanea. Péron and Lesueur. No. 132.	1129
Sycandra raphanus. O. S. No. 647. Amphiblastula after the invagination $\frac{000}{1}$ .	1130
Sycandra raphanus. O. S. No. 647 <i>b</i> . Amphiblastula ver- tically intersected $\frac{000}{1}$ .	1131
Aurelia aurita. L. No. 224.	1132
Pelagia cyanella. Péron and Lesueur. No. 234.	1133
Apolemia uvaria. Lesueur. No. 201.	1134

*Sycandra raphanus*. O. S. No. 647. Young olynthus  $\frac{100}{1}$ .  
1135

*Tubularia indivisa*, L. No. 191 *a*, colony, natural size.  
1136

*Tubularia indivisa*, L. No. 191 *b*.

- i. A Hydranth, enlarged ;
  - ii. One of the racemoselike bunches of Gonophores, enlarged.
- 1137

*Actinoloba dianthus*. E. No. 655.  
1138

Invertebrata, Sub-kingdom VII.—Arthropoda, crabs, lobsters, spiders, and insects, which have bodies made up of successive segments, with a symmetrical nervous system, an external skeleton, chitinous (like horn) or calcified (like chalk) and jointed limbs.

*Palinurus pencillatus*. (Crustacea, Decapoda) spiny lobster.  
1139

Vertebrata including fishes, reptiles, birds, and quadrupeds, which have an internal skeleton, a brain, and a vertebral column or back bone.

## VERTEBRATA.

### CLASS I.—FISHES.

*The First and Simplest of Head-bearing Vertebrates.*

*Order I.* Marsipobrauchii (Lampreys).

*Order II.* Elasmobranchii (Sharks).

*Order III.* Ganoidei (Ganoid fishes).

*Order IV.* Teleostei (Bony fishes).

*Order V.* Dipnoi.

DISARTICULATED COD FISH SKULL (*Gadus Morrhua*). Order  
IV.—Teleostei, Sub-order 2. Anacanthini.

[All the bones are capable of being removed in groups].

Fr.	Frontal.	I. Op.	Interoperculum.
Prf.	Prefrontal.	Tl.	Turbinal.
Ptf.	Postfrontal.	Eth.	Ethmoid.
Mx.	Maxillary.	Vo.	Vomer.
P. Mx.	Premaxillary.	B. S.	Basisphenoid.
Pl.	Palatine.	O. S.	Orbitosphenoid.
Pt.	Pterygoid.	A. S.	Alisphenoid.
Qu.	Quadrate.	S. O.	Supraoccipital.
Ept.	Entopterygoid.	E. O.	Exoccipital.
Mt.	Metapterygoid.	B. O.	Basioccipital.
Os. Sy.	Os Symplecticum.	P. O.	Paroccipital.
Hm.	Hyomandibula.	P. A.	Parietal.
Sh.	Stylohyal.	Mas.	Mastoid.
Eh.	Epihyal.	Sq.	Squamosal.
Ch.	Ceratohyal.	Ot.	Otolith (inside brain cavity).
Bh.	Basihyal.	M.	Mandible.
Brt.	Branchiostegal.	S.	Symphysis of Mandible.
Uh.	Urohyal.	D.	Dentary.
O. P.	Operculum.	A.	Articulary.
P. O.	Præoperculum.	An.	Angular.
S. Op.	Suboperculum.		
		G.	Infraorbital.

(Günther's Nomenclature).

Mounted by MOORE BROTHERS, Osteologists and Disarticulators, Liverpool.

1140

## FISHES.

### Order I.—MARSIPOBRANCHII.

Fishes of a very low grade, having pouch-like gills, and cylindrical worm-like body destitute of limbs. The Lamprey.  
(*Petromyzon marinus*) Petromyzonidae.

1141

*Order II.—ELASMOBRANCHII.*

Fishes with symmetrical lateral pouches for gills. They have two pairs of fins representing the limbs, and the ventral fins are placed far back. The Dog-fish (Scyllidae).

1142

*Order III.—GANOIDII.*

Fishes with polished scales covered with enamel. They have both pairs of limbs, and the ventral fins are abdominal in position. The Sturgeon (Acipenser). It has a swimming-bladder which furnishes the fine isinglass of commerce.

1143

*Order IV.—TELEOSTEI.*

Fishes having a smooth or ribbed or spinose scales over their body.

*Sub-order 1.—Physostomi.*

Fishes in which the swimming-bladder, in the adult, opens into the digestive canal by a duct.

The Herring (*Clupeus harenga*). Its fishery is extensively carried on at the coast of Norfolk.

1144

*Sub-order 2.—Anacanthini.*

The soft finned, spineless, fishes either with no swimming-bladder or one without a duct. The Sole (*Solea vulgaris*).

1145

*Sub-order 3.—Acanthopteri.*

Spiny finned fishes with a ductless swimming bladder, or else none. The Mackerel. The Perch.

The Perch (stuffed) *Perca fluviatilis*. It is not usually of a large size, the heaviest weighs three or four pounds. It is an exceedingly voracious fish and will live for a considerable time out of water.

1146

The Perch, skeleton. (*Perca fluviatilis*).

1147

Dissected specimen of a fish.

1148

The Carp (clay model), (*Cyprinus Carpio*). Order IV — Teleostei, Sub-order I.—Physostomi. It is the best and finest of the European species, and great attention is paid to its breeding in ponds.

1149

The Mackerel (skeleton).

1150

The Mackerel (scomber), stuffed. Order VI.—Teleostei. Sub-order 3.—Acanthopteri. It weighs from one and a half to two pounds.

1151

*Sub-order 4.—Pharyngognathi.*

Pharynx—Jaw-bearing fishes.

The Belone (*Belone vulgaris*). It is also called the Mackerel guide, from its generally preceding the shoals of Mackerel when they go for spawning.

1152

*Sub-order 5.—Laphobranchii or tufted gilled fishes.*

The Syngnathus. Pipe-fish.

1153

*Sub-order 6.—Plectognathi or soldered jaws.*

The Balister. File-fish.

1154

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*Order V.—DIPNOI.*

The swimming bladder becomes an accessory respiratory organ.

The Protopterus or African Mud-fish.

1155



# VERTEBRATA.

## CLASS II.—AMPHIBIA.

### *Cold-blooded Animals.*

*Order I.* Gymnophiona.

*Order II.* Urodela.

*Order III.* Anura.

### *Order I.*—GYMNOPHIONA.

Worm-like forms without limbs. The Anguis. Slow worm.  
1156

### *Order II.*—URODELA.

Limb-bearing amphibians. The Axolott of Mexico (Sire-  
dow pisciforme).  
1157

### *Order III* —ANURA.

The tailless form—Frogs, &c. The Frog. (*Rana tempo-  
raria* ).  
1158

Skeleton of a Frog.  
1159

## VERTEBRATA.

## CLASS III.—REPTILIA ( REPTILES ).

*Cold-blooded Animals.**Order I.* Lacertilia ( Lizards ).*Order II.* Ophidia ( Snakes ).*Order III.* Chelonia ( Tortoises ).*Order IV.* Crocodilia ( Crocodiles ).

Lizard in a glass bottle.

1160

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*Order I.*—LACERTILIA ( Lizards ).

1161

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*Order II*—OPHIDIA ( Snakes ).Vipera aspis. Gallia. Viper. Emile Deyrolle, Naturaliste,  
46, Rue du Bac, Paris.

1162

Snake preserved in spirit in a glass bottle.

1163

Skeleton of a snake. To illustrate the osteology of the  
Reptilia.

1164

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*Order III*—CHELONIA ( Tortoises and Turtles ).

Turtle, clay model.

1165

Dissected specimen of a tortoise.

1166

*Order IV.*—CROCODILIA ( Crocodiles and Alligators ).

Crocodile ( model in clay ).

1167

## VERTEBRATA.

CLASS IV.—AVES ( BIRDS ).

*Warm-blooded Animals without teeth, adapted for aerial locomotion.*

*Sub-class 1.*—RATITÆ ( without a keel in the breast bone ).

*Sub-class 2.*—CARINATÆ ( with a keel on the breast bone ).

*Sub-class 1.*—RATITÆ.

*Order I.*—The Cassowary. The Ostrich. The Emu.

Ostrich, model in clay.

1168

*Sub-class 2.*—CARINATÆ.

- ORDER I. Psittaci ( Parrots ).
- ORDER II. Coccygomorphæ ( Cuckoos, &c. ).
- ORDER III. Pici ( Woodpeckers ).
- ORDER IV. Marcochires ( Swift, &c. ).
- ORDER V. Passeres ( Perchers ).
- ORDER VI. Raptores ( Birds of prey ).
- ORDER VII. Gyranthes ( Pigeons ).
- ORDER VIII. Rasores ( Scrapers ).
- ORDER IX. Grallæ ( Waders ).
- ORDER X. Ciconiæ ( Storks ).
- ORDER XI. Lamellirostres ( Ducks and Geese ).
- ORDER XII. Longipennes ( Long winged birds ).
- ORDER XIII. Steganopodes ( Pelicans ).
- ORDER XIV. Pygopodes ( Penguins ).

DISARTICULATED FOWL SKULL (*Gallus domesticus*).

[ All the bones are capable of being removed in groups ].

P. Mx. Premaxilla.	Pt. Pterygoid.
Mx. Maxilla.	Pl. Palatine.
Ju. Jugal.	Pas. Parasphenoid.
Q. J. Quadrato-jugal.	B. S. Basisphenoid.
Qu. Quadrate.	B. S. Mesethmoid.
Sq. Squamosal.	P. S. Prootic.
A. S. Alisphenoid.	E. O. Epiotic.
S. O. Supraoccipital.	O. O. Opisthotic.
E. O. Exoccipital.	D. Dentary.
B. O. Basisoccipital.	An. Angular.
Pa. Parietal.	S. An. Supra-Angular.
Fr. Frontal.	Ar. Articular.
La. Lachrymal.	S. Splenial.
Na. Nasal.	I. O. R. Infra Orbital Ring.

## Hyoidean Apparatus.

G. H. Glosso-hyal.	B. H. Basi-hyal.
B. B. Basi-branchial.	A. C. Anterior Cornua.
P. O. Posterior Cornua.	

## C. Columella, (Parker's Zootomy).

Prepared and mounted by MOORE BROTHERS, Liverpool.	1169
Skeleton of a parrot.	1170
Dissected specimen of a bird.	1171

*Sub-class 2.—CARINATÆ.*

## ORDER I.—PSITTACI (Parrots).

The most intelligent birds. The Parrot.	1172
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## ORDER II.—COCOYGOMORPHÆ (Cuckoos).

The Cuckoo, the Hoopoe, the King-fisher.	1173
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## ORDER III.—PICI ( Woodpeckers ).

The Woodpecker.

1174

## ORDER IV.—MACROCHIRES ( Swifts and Humming-Birds ).

The Goat-sucker.

1175

Swift.

1176

## ORDER V.—PASSERES ( Perching birds ).

The Nightingale.

1177

The Crow.

1178

Pea Caudata, the European Magpie. France. Emile Dey-  
rolle, &c.

1179

Crow, ( model in clay ).

1180

Cock, ( model in clay ).

1181

## ORDER VI.—RAPTORES ( Birds of prey ).

The owl, the Hawk, the Eagle, the Vulture.

Condor, ( model in clay ).

1182

## ORDER VII.—GYRANTES ( Pigeons ).

The Pigeon.

1183

## ORDER VIII.—RASORES ( Scraping birds ).

The Common Turkey Fowl.

1184

Skeleton of a Turkey.

1185

Model, showing the internal organs and anatomy of a Turkey. Liver, lung, heart, stomach, and intestines.

The hollow bones and cells which are filled with air can be well seen.

1186

## ORDER IX.—GRALLÆ ( Waders ).

The Heron.

## ORDER X.—CICONIÆ ( Storks ).

The Ibis.

1187

## ORDER XI.—LAMELLIROSTRES ( Ducks and Geese ).

The Duck. The Teal.

1188

## ORDER XII.—LONGIPENNES.

The Common Gull.

1189

## ORDER XIII.—STEGANOPODES ( Pelicans ).

The Pelican.

1191

## ORDER XIV.—PYGOPODES.

The Penguin.

1190

## OCTAGONAL CASE No. CXI.

*Specimens of Indian Textiles.*

[ For the contents see Appendix A, page ].

## NORTH-WEST GALLERY.

## WALL FRAME No. CXII.

Glass models to illustrate the development of the Trout, 20 diameters or 400 times, *viz*:—

Ovarium Egg before the splitting of the follicle above the micropyle can be seen. No. 1.

Commencement of the concentration of the germ. No. 2.

End of the concentration of the germ and appearance of the first segmental groove. No. 3.

Segmentation of the germ into two parts. No. 4.

The germ dividing into 4, 6, 8, 16, 32 parts and so on. No. 5.

End of Segmentation. No. 6.

First appearance of the embryo, consisting in a thickening at one point of the marginal swelling. No. 7.

The swollen part forms a prominence which is better indicated and limited than in the preceding stage. No. 8.

The form of the embryo becomes more and more clear. The blastoderm invades the surface of the yolk sac. No. 9.



The blastoderm covering half the yolk sac. No. 10.

The shape of the embryo becomes more lengthened, the central nervous system and the protovertebræ are very distinct. No. 11.

The eggs and the auditory vesicles are formed, the blastoderm is about to completely cover the yolk. No. 12.

The embryo, a short before hatching. No. 13.

The embryo, about to hatch, but still possessing its vitelline sac. No. 14.

Transverse section of germ (No. 4), magnified 60 diameters or 3,600 times. No. 15.

Transverse section of an advanced germ of segmentation. Magnified 60 diameters. No. 16.

Longitudinal section of embryo No. 8. Magnified 60 diameters. No. 17.

Transverse section of embryo No. 8. Magnified 60 diameters. No. 18.

Longitudinal section of the embryo No. 12. Magnified 40 diameters. No. 19.

Transverse section of the embryo No. 12. Magnified 200 diameters or 10,000 times. No. 20.

1192

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## FISH CASE No. CXIII.

Collection of 30 fishes on 30 wooden varnished boards.

(Rajputana Fish).

[ For the list see Appendix B., page ].

1193-1222

## LONG CASE No. CXIV.

*Containing Anatomical Models.*

Nos. 1223 to 1279.

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Comparative Anatomy.

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A series of models designed to show how the processes of life are carried on throughout the animal world from the zoophyte up to man. The differences that these organs present in their structure and functions can be well studied in these beautiful models which were constructed by Doctor Auzoux of Paris.

*Organs of Digestion.*

Stomach of a bee.	1223
Stomach of a locust.	1224
Stomach of an octopus.	1225
Stomach and intestine of a cray-fish.	1226
Stomach and intestine of a dog-fish (a species of shark).	1227
Stomach of a bird of prey, the owl.	1228
* Stomach of a rodent or gnawing animal, such as the rat.	1229

Stomach of a horse. Of the class Solidungula ( having solid or entire hoofs ).

1230

Stomach of lion ( Carnivorous animal ).

1231

Stomach of a granivorous bird, such as the common fowl.

1232

Stomach of a ruminant animal ( one which chews its food twice over as the sheep.

1233

Under-surface of human liver, stomach, and neighbouring parts.

A. Hepatic Artery.

V. Portal vein.

B. Common bile duct.

B. e. f. Ligaments of liver.

2 & 3. Lobes of liver.

1. Gall bladder.

d. Pyloric end of stomach.

i. Ligament of spleen.

h. Mesentery.

c. Large intestine.

4. Small intestine Duodenum.

1234

Front view of the human stomach and duodenum with sections of spleen.

Back view of human stomach with spleen pancreas or sweet bread.

1235

Digestive system of a cockroach.

1236

Section of portion of human body showing digestive system.

- Nasal cavity. No. 1.
- Tongue. No. 2.
- Upper part of a pharynx. No. 3.
- Gullet or *Æsophagus*. No. 4.
- Larynx. No. 5.
- Diaphragm. No. 6.
- Cardiac orifice of stomach. No. 7.
- Stomach. No. 8.
- Pyloric end of stomach. No. 9.
- Pylorus. No. 10.
- Duodenum. No. 11.
- Small intestine. No. 12.
- Ilio-cæcal valve. No. 13.
- Pancreas. No. 14.
- Orifice of common bile and pancreatic duct. No. 15.
- Liver. No. 16.
- Gall bladder. No. 17.
- Large intestine. No. 18.
- Coecum. No. 19.
- Opening of appendix vermiformis. No. 20.
- Ascending colon. No. 21.
- Transverse colon. No. 22.
- Descending colon. No. 23.
- Sigmoid flexure of colon. No. 24.
- Sigmoid flexure of colon. No. 25.
- Rectum. No. 26.

1237

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*Organs for Circulating the Blood.*

Heart and blood-vessels of the *Doris*. (A Cephalopodus Mollusk ).

1238

Heart and blood-vessels of a Mussel.

1239

Heart and blood-vessels of a cuttle-fish.	1240
Heart and gills of a carp ( fish ).	1241
Heart and blood-vessels of an oyster.	1242
Heart and blood-vessels of a dugong. A swimming mam- mal of the Indian Ocean.	1243
Heart and blood-vessels of a turtle.	1244
Heart and blood-vessels of a serpent.	1245
Heart and blood-vessels of a crocodile.	1246
Heart of a human infant just before birth. The size of the heart of a man.	1247
Human heart, showing the ventricles and auricles.	1248
Dissected specimen of a mammal. A rabbit.	1249

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### *The Nervous System.*

Nervous system of an articulated animal in three stages —	
i. The larva.	
ii. The pupa or chrysalis.	
iii. The perfect insect.	1250
Nervous system of a cray-fish.	1251

	125
Nervous system of a spider.	1252
Nervous system of a radiated animal (star-fish).	1253
Nervous system of a mollusk.	1254

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### *Organs of Respiration.*

The wind-pipe (Trachea) air-sacs and heart of an insect, a bug.	1255
The Lungs and Vocal cords of a frog.	1256
The Larynx. Tracheal artery, lungs, and air-sacs of a bird.	1257

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### *Muscular System.*

Human kidneys and supra renal capsules. The left divided so as to show its construction.	1258
Model of the arm of a man showing the muscles.	1259
Model of the human hand, the organ of touch, with the skin removed.	1260
The skeleton of a rabbit. To illustrate the osteology of the mammalia.	1261

## Model of a Scorpion ( after Huxley ).

1. Cephalo-thorax.
2. Chelicerae.
3. Pedipalpi.
4. Basal joints of first appendages forming poste border of mouth.
- 5, 6. Posterior pairs Cephalic appendages.
- 7, 8. Anterior thoracic limbs, S. Pectines.

Mounted by Moore Bros., Liverpool.

1262

Enlarged model of the brain of a skate ( fish ).

1263

Enlarged model of the brain of a carp ( fish ).

1264

Enlarged model of the brain of a viper.

1265

Enlarged model of the brain of a turtle.

1266

Enlarged model of the brain of a goose.

1267

Enlarged model of the brain of a cat ( carnivorous animal ).

1268

Enlarged model of the brain of a rat ( rodent animal ).

1269

The cerebellum or lesser brain of man, with the medulla oblongata and the spinal cord, with the origin of the spinal nerves.

1270

The brain of man. Divided so as to show its different parts, and the origin of the cranial nerves.

1271



Model of the brain (human). Natural size.

1272

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*The Organs of Special Sense.*

The human ear (greatly enlarged) showing its minute construction.

1273

Enlarged model of the eye, showing the muscles, vessels, nerves, membranes, and humours.

1274

Half of the human head, showing the parts at the base of the skull, the eye, the ear, the nasal cavities, the mouth, the tongue, the gullet, and the organ of voice. (Twice the ordinary size).

1275

Model of the throat. Double size.

1276

Magnified section of the human skin, showing hair bulbs, sweat-glands, and sebaceous glands, and ducts.

1. Epydermis (horny layer).

2. Corium.

3a. Corium.

b. Corium.

4. Sweat duct.

5. Sebaceous glands.

6. Cutaneous papillæ.

7. A hair.

a. Stem cut short.

b. Dermic coat of follicle.

c. Root.

d. Fat.

e. Papillæ.

f. Knob.

8. Corium, reticular layer.

1277

The egg of a hen, enlarged 148 times, displaying in four sections, the structure and development of the chick in different stages, *viz.*—

Section 1. 1st day.

Section 2. 5th day.

Section 3. 12th day.

Section 4. 18th day.

See Natural History Diagram Frame No. 71.

1278

Case containing small wax models to illustrate the growth of the bird from the first stage in the egg to the last, and then the complete chicken.

1279

## SMALL CASE No. CXV.

*Containing Silk-worm, Snail, &c.*

Parts of the skeletons of a cat (No. 1280), a duck (No. 1281), and a cod-fish (No. 1282).

These skeletons, prepared for the use of students of zoology, are arranged so as to show, side by side, the differences which exist in the corresponding parts of the skeletons of a mammal, a bird, and a fish.

The bones (No. 1280) on the left side are parts of the skeleton of a cat (taken as a representative of mammals), those (No. 1281) in the middle are parts of a duck (taken as a representative of birds), those (No. 1282) on the right are parts of a cod-fish (taken as a representative of fishes).

In each skeleton the parts of the skull and vertebral column are indicated by the letters A to R on red labels; the parts of the fore-limb by the letters S to X on green labels; and the parts of the hind-limb by the letters S to X on white labels.

The same letter is placed beside the corresponding part in each skeleton. (Presented by the British Museum).

1280-2

Silk-worm (*Bombyx Sericaria*), as type of *Insect* (*Lepidoptera*) at the larva period, considerably enlarged (80 cent. long), complete anatomy; muscles, nerves, tracheæ, viscera, the silk organs in all their full extent, the filière, and the gland, secreted in which Dr. Auzoux has detected a liquid which, very probably, converts the silky matter into insoluble thread.

1283

Anatomy of the Snail (much magnified). The animal is shown very much enlarged in its shell, and parts are removable to show the construction of the internal organs.

1284

Metamorphosis of *Rana esculenta*, Frog, Class Amphibia.  
Order Anoura.

Spawn. Larvæ (Tadpoles), in various stages. Complete Frog.

It presents a very good illustration of the metamorphosis among higher amphibians. The spawns are deposited in water. When first hatched the larva has no limbs, but has a long swimming tail, the hind limbs appear first, the anterior pair become visible afterwards. Gradually the tail is absorbed and the limbs are developed. The larva (tadpole) commences life as a water breathing creature, and grows into a carnivorous adult.

1285

Metamorphosis of *Triton tæniatus* (Newt.) Class Amphibia.  
Family Salamandroida.

Spawn. Larvæ (Tadpoles), in various stages. Complete Newt.

It belongs to the order Urodela or the Tailed Amphibians on account of its retaining the larval tail even when it becomes adult, but the plume-like gills on each side of the neck disappear. The fore-feet have four toes, while the hind-feet have five.

1286

Metamorphosis of *Cetonia aurata*. Class Insecta. Order Coleoptera. Rose-chaffer. Beetle.

The larva is formed of thirteen segments including the head. The parts of the perfect creature are distinctly seen in the pupa before it is full grown. It has three pairs of legs attached to the thorax, and is characterised by its metallic colour and extremely voracious habit.

1287

Metamorphosis of *Vespa vulgaris* (wasp), Class Insecta Order Hymenoptera.

The larva has neither a distinct head nor feet, and during this quiescent state depends upon the adults who feed it.

1288

Metamorphosis of *Apis mellifica*, Honey Bee. Class Insecta. Order Hymenoptera.

Spawn. Larvæ in different stages. Pupæ in different stages. Complete Insect.

1289

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## WALL FRAME No. CXVI.

Development of the Frog. Explained and illustrated by 24 models in clay of the different stages.

The life of the frog in its (first stages) is essentially aquatic, the larvæ or tadpoles breathe by gills; the organs atrophy, the lungs develop, the adult animal has an amphibious, but naturally only breathes air.

Eggs or spawn of the frog with their gelatinous envelope (magnified). No. 1.

Eggs of the frog freed from their gelatinous coat and opened to show after impregnation the yolk sac dividing first into two parts, then into four, eight, sixteen, &c. Nos. 2-8.

Section of the yolk sac after segmentation. No. 9.

Embryos at different stages of development. Nos. 10-13.

Longitudinal section of an embryo after the dorsal cleft is formed. No. 14.

*First Stage*:—Tadpole just appeared with the gill buds on the visceral arches. No. 15.

*Second Stage*:—The external gills developed. No. 16.

*Third Stage*:—The external gills atrophied. No. 17.

Tadpole opened to show the respiratory apparatus adapted to aquatic life. The animal is provided with gills. The heart which is composed of an auricle and of a ventricle is placed in the course of the venous blood as in the fishes. No. 18.

*Fourth Stage*:—The gills are internal. There exists only an opening for the escape of water on the left side. The hind limbs are indicated by buds. No. 19.

*Fifth Stage*:—The opening for exit of water disappears, the atrophy of the gills is complete, the tadpole often comes to the surface of the water to breathe, the hind limbs are developed. No. 20.

*Sixth Stage*:—The four limbs are developed. No. 21.

*Seventh Stage*:—The limbs take the permanent form, the tail atrophies. No. 22.

Frog opened to show the respiratory apparatus transformed and fit for ærial breathing. The animal has two lungs, the circulation has become double, the right auricle receives the veins of the body, and the left auricle the pulmonary veins. No. 23.

*Eighth Stage*:—The metamorphosis is accomplished. The tadpole, an aquatic animal, which feeds on vegetable food, is transformed into the frog, an amphibious and carnivorous animal. No. 24.

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## WALL FRAME No. CXVII.

Natural History Plate. Subject—Placental Mammals. Order—Bunodont Ungulata. Family suide or swine. The Wild Boar and the Pig.

In these animals the nose is cylindrical and tapering, and is truncated at the extremity. The tip is employed in turning up earth for food. They are very prolific, and are found in warmer climates. No. 117. Emile Deyrolle, Paris.

1292

## WALL FRAME No. CXVIII.

Natural History Plate. Subject—Placental Mammals. Order—Ungulata. Family—Solidungula or Equidæ. The Horse and the Ass. Their original home is the Old World. The Europeans introduced them into America. They are invaluable as beasts of burden and draught. No. 116. Emile Deyrolle, Paris.

1291

## WALL FRAME No. CXIX.

Natural History Plate. A drop of water, magnified 300 diameters, seen under the microscope discloses the existence of an infinite number of actively moving unicellular ciliated organisms of a variety of forms ranging in size from  $\frac{1}{25}$ th to  $\frac{1}{2400}$ th of an inch in length. All the orders of these are illustrated with their nomenclature. No. 89. Emile Deyrolle, Paris.

1293

Natural History Plate. Subject—Three varieties of the Bombycidæ family of silk-worms, their cocoons, silk threads, and the stuff manufactured by them. No. 88. Emile Deyrolle, Paris.

1294



## WALL FRAME No. CXX.

Synoptic table of sericulture, illustrating the development of the silk-worm, the general principles that govern its culture, and the necessary utensils required for a silk-worm nursery. No. 50. Bouasse Lebel, Paris.

1295

## WALL FRAME No. CXXI.

Collection to illustrate Indian sericulture. Presented by the Trustees of the Indian Museum, Calcutta.

*Antheræa Mylitta*. The "Tusser" Worm.

A semi-domesticated bivoltine silk-worm, largely reared in many parts of India in the open air upon various trees amongst which are the *Daryeti* (*Lagerstraemia indica*), the *Bher* (*Zezyphus jujuba*), the *Karinda* (*Carissa Carandus*), the *Saj* tree (*Terminolia tomentosa*). The Cocoon can be reeled, and yields a large amount of valuable silk which is remarkable for its strength and durability. The silk is largely exported in the form of locally woven cloth, reeled silk, and waste, and forms a considerable item of trade.

1296

## WALL FRAME No. CXXII.

Collection to illustrate Indian sericulture Presented by the Trustees of the Indian Museum, Calcutta.

*Bombyx Mori*. The "Annual" or "Cashmere" Worm.

The common mulberry feeding silk-worm, reared in Japan, China, Bokara, Cashmere, Afghanistan, Persia, South Russia, Turkey, Egypt, Algeria, Italy, France, Spain, United States of America, and to a small extent in the Punjab and North-Western Provinces of India.

1297



**BOMBYX MERIDIONALIS.** This is probably only a variety of the "Chota Pat;" it is reared in Mysore and Madras Presidency.

1298

### WALL FRAME No. CXXIII.

Collection to illustrate Indian Sericulture. Presented by the Trustees of the Indian Museum, Calcutta.

**ATTACUS ATLAS.** A wild silk-worm found in many parts of India, besides Burmah, Ceylon, Java, China, and other parts of Southern Asia. It feeds upon a large number of different plants, but is not cultivated for its silk which, however, is said to have a considerable market value when obtained in sufficient quantities.

1299.

### WALL FRAME No. CXXIV.

Collection to illustrate Indian Sericulture. Presented by the Trustees of the Indian Museum, Calcutta.

**ATTACUS RICINI** or "Eri" Silk-worm. A multivoltine silk worm which is domesticated in Assam, Cachar, and Northern Bengal; it feeds upon the castor oil plant, and produces a valuable silk. The cocoon can not be reeled, but the silk is carded, and there is a considerable trade in it in the forms of woven silk, waste, and yarn.

1300

### WALL FRAME No. CXXV.

Collection to illustrate Indian Sericulture. Presented by the Trustees of the Indian Museum, Calcutta.

**CRICULA TRIFENESTRATA**, the "Amluri" or "Mango Silk-worm". A wild silk-worm recorded from many parts of India and Burmah, and also from Java. The cocoons are found in masses upon mango, Sum, and other trees; they can not be reeled, and are of but little value.

1301

## WALL FRAME No. CXXVI.

Collection to illustrate Indian Sericulture. Presented by the Trustees of the Indian Museum, Calcutta.

**BOMBYX FORTUNATUS**, "Desi" or "Chota Polo". A small mulberry feeding multivoltine silk-worm largely reared in Bengal where it yields the principal cold weather crop of cocoons.

1302

**BOMBYX CRÆSI**, "Nistree" or "Madrassee". A small multivoltine mulberry feeding silk-worm largely reared in Bengal where it yields the principal hot season crop of cocoons.

1303

**BOMBYX ARRACANENSIS**, "Nya Paw". A multivoltine mulberry feeding silk-worm reared in Arracan and Burmah.

1304

## WALL FRAME No. CXXVII.

Collection to illustrate Indian Sericulture. Presented by the Trustees of the Indian Museum, Calcutta.

**BOMBYX SINENSIS**, "Sina" or "Chota Pat". A small multivoltine mulberry feeding silk-worm recorded from Bengal. Its silk is inferior to that of the "Desi" and "Madrassee," and its cultivation is said to be dying out.

1305

**BOMBYX TEXTOR**, "Boropolo" or "Pat Major". An annual mulberry feeding silk-worm, recorded from Bengal and China. Its cultivation seems to be dying out in India.

1306

**THEOPHILA HUTTONI**. A wild silk-worm found feeding on indigenous mulberry trees in the North-Western Himalayas. It has not been found possible to rear these worms successfully in captivity, and the silk is not made use of commercially at present. The worm is bivoltine in Mussooree.

1307

**RHODIA NEWERA.** A wild silk-worm found in Sikkim and Nepal upon a species of weeping willow. The silk is not made use of in any way.

1308

## WALL FRAME No. CXXVIII.

Collection to illustrate Indian Sericulture. Presented by the Trustees of the Indian Museum, Calcutta.

**ANTHERÆA ASSAMA, "Mooga".** A semi-domesticated multivoltine silk-worm largely reared in Assam in the open air upon the Sum tree (*Machilus Odoratissima*), the Sualu (*Tetranthera Monopetala*), and other forest trees. The Cocoons can be reeled, and yields a valuable silk in which there is a considerable trade.

1309

**ACTIAS SELENE.** A wild silk-worm found in many parts of India besides Ceylon and China. No use is made of its silk.

1310

## WALL FRAME No. CXXIX.

Natural History Card. Subject—The thoracic and abdominal cavities of man laid open to show the organs of respiration of the blood and digestion. Emile Deyrolle, Paris.

1311

## WALL FRAME No. CXXX.

Natural History Card. Subject—Man. The organs of the senses. (The structure of the Eye and the Ear, and half of the human head showing the convolutions of the brain forming the centre of the nervous system and other details connected with the head). Emile Deyrolle. Paris.

1312

## WALL FRAME No. CXXXI.

Natural History Card, illustrating the dental system of mammals (Carnivorous and Rodent) and four examples— ( the bat, the mole, the hedge-hog, and shrew mouse ) of insect-feeding mammals which are agricultural auxiliaries. Emile Deyrolle, Paris.

1313

## WALL FRAME No. CXXXII.

Natural History Card, illustrating the different parts of the egg of a bird and type examples of the Passerine birds ( Tom-tit and Swallow ), Birds of Prey ( owl ), and Climbers ( woodpecker ). Emile Deyrolle, Paris.

1314

## WALL FRAME No. CXXXIII.

Natural History Card, illustrating Reptiles ( Viper, its head showing the poisonous fang and the poisonous gland, and the heads of the venomous and harmless snakes ) and the anatomy of a fish. Emile Deyrolle, Paris.

1315

## WALL FRAME No. CXXXIV.

Natural History Illustrated Card. Invertebrata (Articulata). The useful, the auxiliary, and the injurious insects. Emile Deyrolle, Paris.

1316

## WALL FRAME No. CXXXV.

Natural History Card, illustrating by typical examples the sub-kingdoms of the Invertebrata known as the Articulata, Mollusca, and Radiata. Emile Deyrolle, Paris.

1317

## WALL FRAME No. CXXXVI.

Natural History Illustrated Card. Subject—The bee-hives, the bees, and the silk-worm. Emile Deyrolle, Paris.

1318

## WALL FRAME No. CXXXVII.

Natural History Illustrated Card. Subject—River Fish. Order—Teleostei. *Sub-order Physostomi* or those which have soft and jointed fin rays, as, the pike and the carp. *Sub-order Acanthopteri*. Spiny-finned fishes as the perch and the gudgeon. Emile Deyrolle, Paris.

1319

## WALL FRAME No.

Natural History Illustrated Card. Subject—Sea-fish. Order Teleostei. *Sub-order, Physostomi*. (The Sardine and the Herring). *Sub-order, Anacanthini* (the cod). Emile Deyrolle, Paris.

1320

## WALL FRAME No. CXXXIX.

1321

## WALL FRAME No. CXL.

1322

## WALL FRAME No. CXLI.

Felt models of animals belonging to the class Mammalia, made in proportion as regards size.

## CLASS—MAMMALIA.

Mammals are the highest class of terrestrial vertebrate animals, having a vertebrate column or back bone. They have a hard bony skeleton and warm blood. They breathe by means of lungs and suckle their young which are born alive.

Their bodies are generally covered with hair. More than three thousand species of Mammalia are known. They are divided into sixteen orders.

*Order I.—MONOTERMATA.*

The Ornithorhynchus or Platypus (duck-mole). It is an aquatic animal exclusively found in Australia, which feeds on insects and lives in burrows made in the banks of rivers. The young animal after being hatched is quite blind as the eye is at first covered by the skin. It is more than 18 inches in length.

The Echidna or Spiny Ant-eater. It is found in Australia, Tasmania, and New Guinea. Its jaws are not furnished with teeth, and the insects upon which it feeds are caught by protruding its long and sticky tongue. It is a nocturnal animal, lives in burrows, and is 15 to 18 inches in length.

1323

*Order II.—MARSUPIALIA.*

The Kangaroo. Its original home is Australia, and it is herbivorous. Its ordinary mode of progression is leaping, and it is unusually swift. Good fur is made out of its hair, and its flesh is eaten. It has a sort of bag in the abdomen in which the young ones are carried about. Its body is six feet with a tail three feet in length.

The Opossum. It is a native of America, and lives in woods and forests. Its food consists of small animals (mice, birds, and insects) and fruits, and its habits are nocturnal. It is generally of a small size, the largest measures from two feet to three feet, inclusive of the tail.

1324

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*Order III.—EDENTATA.*

The Ant-eater.—There are two families of this species, one is the Hairy Ant-eater which is found in South America, and the other is the Scaly Ant-eater or Pangolin which is peculiar to Asia and Africa.

The Hairy Ant-eater is a solitary, harmless, and gentle animal, and lives upon termites which are captured by forcing out its glutinous tongue. Its length is over 4 feet.

The Scaly Ant-eater or Pangolin has a glutinous tongue. At the time of danger the animal assumes the form of a ball. It measures over three feet including the tail.

The Armadillo. It is found in South America and lives in burrows on the borders of woods. Insects, worms, and fruits form its food for which he wanders about during the night. The Indians regard its flesh a great luxury, and its coat of mail serves as a basket. Its length varies from ten inches to three feet.

1325

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*Order IV.—BRADYPODA OR SLOTHS.*

The Sloth. It is a tailless animal, and an inhabitant of South America. It is a strict vegetarian and is arboreal. It passes its life suspended back downwards from the trees in which posture it retains even while asleep with its three long claws on each foot. Its length is about sixteen inches.

1326



*Order V.—SIRENIA OR MANATEES.*

The Dugong (Sea-cow). It is a marine animal, whose form and habits are somewhat like a fish, and inhabits the Indian Ocean. A full grown creature measures eighteen or twenty feet in length.

1327

*Order VI.—UNGULATA OR HOOFED ANIMALS.*

*Sub-order I.—Odd-toed Animals.*

The Horse. Its native country is Central Asia whence they spread throughout the Old World. Europeans introduced them into America. It is purely herbivorous and is very valuable to man as a beast of burden and draught.

1328

The Horse (Arab). This breed of horses is well known throughout the world, and extends from South-Western Asia and Upper Egypt to Africa.

1329

The Zebra. Native of Africa where it lives in herds and is savage. It is very difficult to tame it, and it is hunted for its flesh and fur.

1330

The Ass. It is found in Southern Europe, Asia, and Egypt, and is commonly employed for carrying burdens and riding. It is useful and brave creature.

1331

The Rhinoceros. It is found in marshy places of the warmer parts of the Old World and is herbivorous. The horn is its terrible weapon. It is hunted for its thick hide and horn which yield several articles of commerce.

1331 bis.

*Sub-order 2.—Even-toed animals. Bunodonts.**( Non-ruminants ).*

**The Boar.** In a wild state it is confined to the temperate parts of the Old World and lives in marshy portions of the woods and forests. It feeds partly on herbs and roots and partly on animal substances such as insects and small mammals. It does immense damage to crops and is hunted for its very savoury flesh.

1332

*Sub-order 2.—Even-toed animals ( Ruminants ).*

**The Camel.** It is peculiar to Asia and Africa and is very useful to man. The Arabs call it the "ship of the desert," and it is patient and enduring. Man eats its flesh, drinks its milk, and with its wool and skin, clothes himself. It measures from seven to ten feet in length.

1333

**The Buffalo.** It is found now in Southern parts of Asia and Europe and North Africa, but it was originally a native of India. It is fond of living in marshy places and rivers, and is used as a beast of burden and draught.

1334

**The Cow.** Found in Europe, Asia, and Africa, and is invaluable to man among the domestic animals. The best milk in very large quantities is obtained from her.

1335

**The Goat.** Found in flocks inhabiting the rocky grounds at a considerable elevation in all parts of the globe. The domestic goat is derived from the wild stock of the Caucasus and Persia. Its milk produces good cheese, and the skin and hair also furnish many important articles.

1336

**The Ibex.** Few species of it exist in the highest mountains of Europe, Asia, and Africa, and are becoming rare. It is also called Wild Goat.

1337

The Sheep. Found in all parts of the Old World, it seems to be one of the earliest animals domesticated by man. During winter it is kept under a shade, but in the summer it feeds on the pasture. Its good, gentle, and easy nature has become proverbial.

1338

The Reindeer. Native of the extreme north of Europe, Asia, and America, and lives in large herds. It feeds upon moss and a kind of lichen. The Laplanders use it as a beast of burden and every part of its body is turned into some useful article.

1339

The Antelope. Several species of it are found in Asia and Africa. One family inhabits the mountain ranges of Europe. The animal is herbivorous and lives in flocks.

1340

The Deer. It ranges over Northern Europe, Asia, and North America, and varieties of it may be said to be distributed in almost all parts of the world. Its food consists of almost all kinds of vegetable substance.

1341

The Giraffe or the Camelopard. It is a native of Africa and is found south of Sahara where it lives in small herds feeding upon the tender shoots and leaves of trees. Harmless and inoffensive, when attacked it defends itself by kicking. It measures from fifteen to eighteen feet in height.

1341 bis.

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*Order VII.—CETACEA (Whales).*

The Whale. An inhabitant of the Northern parts of the Atlantic and Pacific, it is hunted to a large extent for the blubber (subcutaneous fat) which yields the whale oil of commerce. It lives upon diminutive animals and is from 48 to 72 feet long. The whale-bone is also an important article.

1342

The Dolphin. It occurs in all the seas of the Northern Hemisphere, and is particularly found in large numbers in the Mediterranean. It swims in flocks and averages from six to eight feet in length. Its fondness to accompany ships for many miles is remarkable.

1362

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*Order VIII.—PINNIPEDIA.*

The Seal. It is abundant in the seas of the Arctic and Antarctic regions, and comes to land only to bask and sleep in the sun and to spawn. Fish forms its food. It is hunted by the inhabitants of the North for its flesh, fat, oil, tendons, bones, and fur, and is nearly six feet long.

1343

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*Order IX.—CARNIVORA, Flesh-eating Animals.*

The Dog (Canidæ or dogs). Several varieties of it have been found in different parts of the world and it is an invaluable companion to man. Its faithfulness and gratitude have become proverbial.

1344

The Wolf. Several distinct species of wolves are distributed in different parts of the world. It generally lives in the mountain forests whence it comes down to commit ravages amongst sheep and other domesticated animals, and is about the size of a large dog.

1345

The Fox. It ranges over most of Europe, Asia, North Africa, and North America. Its cunning behaviour has been the subject of many fables. In its habits it is nocturnal and solitary. Rabbits, hares, partridges, and small animals form its food.

1346

The Cat. (Family Felidæ or Cats). It is to be found in all the warmer regions of the world. It can both swim and climb easily, and is nocturnal and solitary in its habits or lives in families. Being a coward it will never come face to face with its enemy unless it is wounded.

1347

*Order IX.—CARNIVORA, Flesh-eating Animals.*

( Family Felidæ or Cats. )

**The Lion.** It is an inhabitant of the Old World, and is found in Africa and the South-Western parts of Asia. It chiefly lives in portions of dry desert covered with brushwood during the day, and at night visits the places where large herbivorous animals go to drink water and which form his prey.

1348

**The Tiger.** It is exclusively confined to Southern Asia, but is also found in the neighbouring islands of Java, Borneo, and Sumatra. In size it is equal to the lion, but is a more active and dangerous adversary.

1349

**The Leopard.** It is distributed over all the tropical parts of the Old World. It is a very powerful and active creature, and can climb trees with great facility.

1350

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 ( Family Ursidæ. )

**The Bear.** Found in the wooded tracts of mountainous countries all over the globe excepting Australia and Africa. Its food consists of roots, fruits, honey, insects, and other mammals. It attains an advanced age, and hibernates in winter. It is generally hunted for its skin and fat.

1351

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*Order X.—HYRACOIDEA. Tailless Animals.*

**The Coney.** It is found in the rocky districts of Palestine and Syria. It is the Shaphan of the Hebrews. It is herbivorous, and tender roots of shrubs and herbs constitute its food.

1352

*Order XI.—RODENTIA. Gnawing Animals.*

## ( Family Leporidæ. )

The Hare. It is distributed over the whole of the earth with the exception of Australia, and makes depressions or forms in the ground to live in. It is herbivorous, and is rather a nocturnal animal. It is hunted for its savoury flesh and beautiful skin.

1353

## ( Family Castoridæ. )

The Beaver. It is an aquatic animal and is found in the northern parts of both the hemispheres. It lives on the banks of rivers where it raises large dams with stems of trees cemented with mud. Its skin is employed in the manufacture of hats, and the fatty substance called castor furnished by it is a well known therapeutic agent.

1354

## ( Family Muridæ. )

The Rat. It is a burrowing animal and is found almost over the whole world. There are about three hundred species extant. It is not strictly a vegetarian, and commits very great deprecations upon provisions in a house.

1355

## ( Family Sciuridæ. )

The Squirrel. It is found in all the countries, and has an arboreal life. It lives entirely on trees, and is a very active little creature. Leaves of trees and fruits form its food.

1355 bis.

*Order XII.—PROBOSCIDEA ( Elephants. )*

## ( Elephas Indicus. )

The Elephant. It is a native of India, Ceylon, Burmah, Siam, Cochín-China, the Malay Peninsula, and Sumatra.



It differs from the African species by having a concave forehead while that of the African species is convex. Its sagacity is well known, and is found in herds. It is said to live from one hundred to four hundred years. It feeds entirely upon vegetable substances, and ivory which is an important article of commerce is furnished by its tusks.

1356

*Order XIII.—PROSIMII.*

The Lemur. It is confined to the Island of Madagascar and to other islands in the Indian Ocean. It has an arboreal life, and lives upon fruits and insects. The largest measures about three feet in length.

1357

*Order XIV.—INSECTIVORA.*

(Family Erinaceidæ.)

The Hedge-hog. It is principally found in the warmer regions of the Eastern Hemisphere, and is an omnivorous and nocturnal animal. When disturbed it at once assumes the form of a ball with its sharp spines pointing in all directions.

1358

(Family Talpidæ)

The Mole. It ranges from Britain to China, and has a subterraneous life living in burrows of a complex structure. Worms and the larvæ of insects constitute its food.

1358 bis.

*Order XV.—CHEIROPTERA (Bats).*

The Bat. It is a nocturnal animal and is found in all parts of the globe. Its senses are said to be very acute, and is both carnivorous and frugivorous. In its flight it is not very active and rapid, and upon the ground its progression is difficult.

1359



*Order XVI.—PRIMATES. (Monkeys, Apes.)*

The Orang Outang (*Simia Satyrus*). It is an inhabitant of Borneo and Sumatra, and is arboreal in its habits. There is a close resemblance in its structure to man, and when erect it is over four feet high.

1360

Man (*Homo*). Its bipedal progression and erect posture distinguish it from the other primates, and its brain is larger and more complex in structure than that of any other mammal. It is susceptible of education for which all other created beings are entirely unfit.

1361

1362

## WALL FRAME No. CXLVII.

Map. The distribution of animals in zoological provinces, after Selater and Wallace. Prepared under the direction of Dr. Andrew Wilson, Edinburgh School of Medicine, &c.

1363

## WALL FRAME No. CXLVI.

Map. Geographical division and distribution of Rodentia and Ruminantia (Gnawing and Ruminating animals). By A. K. Johnston, F. R. G. S.

1364

## WALL FRAME No. CXLV.

Map. Geographical division and distribution of the Birds of Europe, from the latest authorities. By A. K. Johnston, F. R. G. S.

1365

## WALL FRAME No. CXLIV.

Map. Geographical division and distribution of Reptilia (Reptiles) by A. K. Johnston, F. R. G. S., and Geographical division and distribution of ophidia (serpents), according to Schlegel.

1366

## WALL FRAME No. CXLIII.

Map of the distribution of Marine Life, illustrated chiefly by fishes, molluscs, and radiata, showing also the extent and limits of the Homoeozoic Belts, now first laid down for Keith Johnston's Physical Atlas by Professor Edward Forbes, F. R. S.

1367

## WALL FRAME No. CXLII.

Map of "The World" on the projection of Colonel A. C. Hamilton, R. E., showing the distribution of animals in zoo-geographical regions, after A. R. Wallace. Lithographed by W. Griggs, London, 1889.

1368

## WALL FRAME No. CXLIII.

Natural History Plate illustrating the horns of ruminant animals and their use in industrial arts. No. 176. Bouasse Lebel, Paris.

1369

## WALL FRAME No. CXLIX.

Natural History Plate showing the classification of mammalia or mammals after Cuvier. No. 160. Bouasse Lebel, Paris.

1370

## WALL FRAME No. CL.

Natural History Plate illustrating the teeth of Mammalia.  
No. 166. Bouasse Lebel, Paris.

1371

Horns of Ruminants mounted and hung on the walls.  
For a detailed catalogue see the labels.

1372-83

## LARGE BOMBAY SHOW CASE No. CLI.

*Containing Models of a Horse, Man, &c.*

Foot of the Cow, showing its formation. Auzoux, Paris.

1384

Left leg of a horse, well formed leg, healthy, covered by skin only.

1385

Sound leg of the Horse, skin removed to show the anatomy or construction. Parts can be removed in which the bones are specially liable to disease, and replaced by other portions showing the different diseases. These are arranged on the blocks on the shelf above them. Auzoux, Paris.

1386

Unsound leg of a horse showing the various deformities. Tumours, osseons, with the skin on; leg, with specimens of all the osseons, tumours, fixed. Auzoux, Paris.

1387

Diseases of the bones of the leg of the horse. Tumours, *osseous*, removable; healthy leg of horse, flayed, cut 20 cent. above the articulation of the hock, on the bone of which a tumour is placed, which part of the bone can be taken out and replaced by pieces of diseased bone; also 13 pieces for changing, showing the different stages of development of all the osseous tumours known as spavin, jades, curbs, splints, and ringbones. Auzoux, Paris.

1388

Tumours, *soft*, of the leg of horse, partly flayed, partly covered by skin, on which are shown specimens of soft tumours, wind-gall, vessicon, and capped hock. The skin of the leg is removed to show the anatomy or deformities. Auzoux, Paris.

1389

Leg, *in skeleton form*, of which every bone can be detached ; composed of 13 different bones. Auzoux, Paris.

1390

Foot of *Horse*, with the pastern, showing the hoof, podophyllus tissues, plantar pad, vessels, nerves, &c., all of which parts can be detached separately. Auzoux, Paris.

1391

Horse, complete, *Arab type*, 1 m. 30 cent. complete anatomy, representing more than 3000 objects of detail, and composed of 97 separate removable pieces, showing on one side the muscles and vessels of the superficial layer, which can not be detached, and on the other the muscles, nerves, and vessels removable piece by piece, as in dissection, from the superficial layer to the skeleton. The splanchnic cavities are furnished with all their proper organs, which can be taken out and studied separately. This new model of the horse, perfect in form and detail, has been adopted by all *cavalry regiments and veterinary and agricultural schools* in France. In imitation of France, several foreign governments have acquired them as a powerful means of vulgarising the knowledge of anatomy and physiology, which is indispensable for the amelioration, the choice, use, and preservation of the horse. Auzoux, Paris.

1392

*Clastic Man, incomplete*, 1 m. 80 cent. *intended for teaching Natural History in colleges and schools where special attention is not given to the study of practical medicine*, representing on one side, the muscles and vessels of the superficial layer, and on the other, the muscles, vessels, and nerves of the inferior layer ; likewise showing the same sections and details of the organs contained in the splanchnic cavities, also removable, as the complete model. Auzoux, Paris.

1393

*Perca fluviatilis*, (Gallia). Order Teleostei. Sub-order Acanthopteri. (Class Fishes). The common Perch. It is sometimes marine and sometimes fresh water in habit.

1394

*Vespertilio Murinus*, (Gallia). Order Cheiroptera. (Class Mammalia). The common insectivorous small bat.

1395

*Syngnathus*. The Pipe-Fish. Order Teleostei. Sub-order Lophobranchii. (Tufted-gilled fishes). It has no ventral and first dorsal fins and has an elongated snout.

1396

Heron. Order Grallæ of the birds. Family—Ardeidæ. Its food consists of fish which it seizes while wading in the margins of water

1397

Pelican. Order Steganopodes (Aves). Family—Pelicanidæ. It frequents the banks of rivers and takes and subsists on fish.

1398

Eagle. Order Raptores (Aves). Family Falconidæ.

1399

"Yaggy's Anatomical Study," presenting the skeleton, muscles, arteries, veins, and nerves, also four life-size Manikins of the body, the head, the eye, and the ear, the whole constructed under the supervision of Dr. Henry M. Lyman, Dr. Christian Fenger, and Dr. W. F. Smith. In addition, there are plates illustrating Blood formation, its Purification and Circulation, and the effects of alcohol and narcotics on the Human System, supervised by Professor Daniel Wilkins, A. M.

1400

Teacher's Hand Book for Yaggy's Anatomical Study.

1401

## SMALL SHOW CASE No. CLII.

### *Containing Paleontological Models.*

Models of Animals, now extinct, which lived on the earth in the earliest ages. They are known from their fossil remains, and their forms are conjectural.

**Rhamphorhynchus.**—A flying lizard with hollow bones and a long tail. The anterior portion of its jaws appears to be toothless, and may have formed a horny beak. It flourished in the Jurassic age.

1402

**Sivatherium Giganteum.**—A huge ruminant resembling both giraffe and antelope in its structure of teeth and horns respectively. Its extinct remains were found in the Sivallik Hills ( India ), and it lived in the Pliocene period.

1403

**Rhinoceros Tichorhynchus.**—"The Woolly Rhinoceros." It was contemporary with the Mammoth, and its body has been found in frozen soil in Siberia.

1404

**Mastodon Longirostris** from Hesse Darmstadt, ( also found in India ) some 11 ft. high, have been found in marshes in America. Fossil remains obtained in the Miocene ( Tertiary ) formation.

The Mastodons begin in the Miocene period, they were also discovered in the Pliocene formation, and lived in the Old World to the period succeeding it ( Quaternary Period ).

1405

**Iguanodon (Iguanechse).** A great extinct herbivorous land reptile discovered in the great wealden deposits. Some were over thirty feet long.

1406

**Pterodactylus (Flugsaurier), Flying Lizard.** It had no true feathers like those of a bird, but they were similar to the thin membrane of a bat. The largest was twenty-five feet. From the Schenlophen limestone and great Oolite beds and the Lias. Lived in the Jurassic Age.

1407

**Megalosaurus (Grossaurier) Great Lizard,** from the Oolite beds. A carnivorous animal, probably thirty feet in length, was a powerful and terrible lion of the Mesozoic Age.

1408

**Anoplotherium** (Waffenloses Thier). Found in the Lower Miocene formation. A ruminant equal in size to a fallow-deer. It has teeth of uniform height like man.

1409

**Ichthyosaurus**. Short-necked marine (sea) Fish Lizard, twenty-two feet long, eight feet across the paddles. The sharks of the old Liassic Seas.

1410

**Archæopterix Lithographica** (Urvogel) [Macrura]. The long-tailed fossil bird from the Lithographic stone Sothenopen, Bavaria. The oldest fossil bird known.

1411

**Hylæosaurus** (Wäldersaurier). A huge plated lizard, an armed Dinosaur or land reptile, with formidable spines on its back from the Wealden formation. Perhaps amphibious or living in both land and water.

1412

**Brontosaurus Excelus**. A gigantic Dinosaur. Length nearly sixty feet, was found in the Jurassic rocks of Colorado (Allantosaurus beds). It had strong and massive legs and solid limb bones, and was probably amphibious in its habits.

1413

**Dinotherium Giganteum** (Schreckenthier). An extinct animal like an elephant with tusk-like teeth (incisors) in the lower jaw. Found in the Upper Miocene formation.

1414

**Mastadonsaurus robustus** (zitzenzahnsaurier). A gigantic extinct genus of Labyrinthodonts, amphibious in its habits, discovered in the European Triassic Rocks.

1415

**Plesiosaurus** (dolichodeirus) (Schlangesaurier). A long-necked sea lizard, from the Lias. Its jaw was six feet long, and its teeth fifteen inches. Its paddle was seven feet in length.

1416

**Nicrosaurus Phytosaurus** (Neckarechse). Crocodile. From the Triassic strata of Europe.

1417



*Anchitherium*. An early ancestor of the Horse. Extinct animal from the Miocene formation.

1418

*Dinoceras Mirabile*. A huge extinct herbivorous animal, from the Eocene formation.

1419

*Cervus Megaceros*. The Gigantic Irish Deer. Found in peat bogs in Ireland. Its antlers sometimes spread nine feet across.

1420

*Elephas Primigenius*. The "Mammoth" Elephant. Found in the frozen soil in the North of Siberia. Even the skin and flesh have been found.

1421

Skull of *Dinornis* (extinct bird) from Middle Island, New Zealand. Presented by Dr. Johnson, I. M. D., Simla.

1422

Bones of *Dinornis robustus*, from Middle Island, New Zealand.

1423

Bones of the Moa or *Dinornis*, a gigantic extinct bird. Thigh bone. From New Zealand. Presented by Dr. Johnson, I. M. D., Simla.

1424

Bones of the Moa or *Dinornis*, a gigantic extinct bird. Thigh bone. From New Zealand. Presented by Dr. Johnson, I. M. D., Simla.

1425

A coprolite or nodule, formed of phosphate of lime, much used for artificial manure. Formerly supposed to be excrementitious, and formed by fish and reptiles of the geological chalk marls, green sands, &c., (contain often organic remains).

1426

## WALL FRAME No. CLIII.

Natural History Plate. Subject—Age of the bull and the horse, the section of the foot of a horse, and various articles taken from mammals for the use of man. No. 106.  
Emile Deyrolle, Paris.

1427

## WALL FRAME No. CLIV.

Veterinary Diagram. External form and elementary anatomy of the horse. Sheet No. 1.

1428

## WALL FRAME No. CLV.

Veterinary Diagram. The age of domestic animals—Horse, ox, sheep, and dog. Sheet No. 2.

1429

## WALL FRAME No. CLVI.

Veterinary Diagram. The unsoundness and defects of the Horse. Sheet No. 3.

1430

## WALL FRAME No. CLVII.

Veterinary Diagrams. The shoeing of the horse, mule, and ox. Sheet No. 4.

1431

## WALL FRAME No. CLVIII.

Veterinary Diagrams. The elementary anatomy, points, &c., and Butcher's joints of the ox. No. 5.

1432

## WALL FRAME No. CLIX.

Plaque, showing the formation and use of the teeth of the horse at different ages.

1433

## WALL FRAME No. CLX.

Natural History Plate. Subject—Carnivorous Mammal. The lion of Atrica, different parts of its skull (natural size) and its two toes of the bony paw No. 105. Emile Deyrolle, Paris.

1434

## WALL FRAME No. CLXI.

Natural History Plate. Subject—Mammals. Flesh-eating and rodent (gnawing) animals, illustrated by type examples. No. 104. Emile Deyrolle, Paris.

1435

## WALL FRAME No. CLXII.

Natural History Plate. Subject—Mammals. The age and the anatomy of the skull, the digestive apparatus, and the foot of the sheep (a ruminant mammal) with the nomenclature of all the parts. No. 103. Emile Deyrolle, Paris.

1436

## WALL FRAME No. CLXIII.

Natural History Plate. Subject—The wild boar, an even-toed ungulata, the anatomy of its skull and foot. No. 102. Emile Deyrolle, Paris.

1437

## WALL FRAME No. CLXIV.

Natural History Plate. Subject—The Indian Elephant. Belonging to the order Proboscidea or an animal having a large trunk, its upper jaw and a piece of the tusk. No. 101. Emile Deyrolle, Paris.

1438

## WALL FRAME No. CLXV.

Natural History Plate. Subject—Mammals. Cetaceans, illustrated by the whale which inhabits the North Seas, and a piece of the whale bone. No. 100. Emile Deyrolle, Paris.

1439

## WALL FRAME No. CLXVI.

Natural History Plate. Subject—Mammals. Order—Marsupialia, illustrated by a type example of Opossum and the anatomy of its skull; the Order Edentata by the great armadillo; and the Order Monotermata by the ornithorhynchus. No. 99. Emile Deyrolle, Paris.

1440

## WALL FRAME No. CLXVII.

Natural History Plate. Subject—The human skeleton with the nomenclature of all the parts. No. 111. Emile Deyrolle, Paris.

1441

## WALL FRAME No. CLXVIII.

Copy of Ceiling Panel, made in the Lahore School of Art, Lahore, for the Billiard Room of H. R. H. the Duke of Connaught at Bagshot.

1442

## WALL FRAME No. CLXX.

- Very large model of a beautifully carved door, white wood,  
made at Kapurthala, sent by the Lahore Museum. 1443
- Thirty-nine blocks of different patterns, used for printing  
floor-clothes, &c. Carved wood. Jeypore. 1444-82
- Bracket, carved shisham wood. Shekhawati, Jeypore. 1483
- Bracket, carved open work, shisham wood. Shekhawati  
work. Jeypore. 1484
- Bracket or Almirah, walnut wood, carved, made at Kapur-  
thala. 1485
- Whatnot, carved, white wood. Saharanpur. 1486
- Salver, circular, leaf pattern, carved white wood. Saharan-  
pur. 1487
- Salver, circular, carved white wood. Saharanpur. 1488
- Panel, round octagonally, perforated or Pinjra work, shisham  
wood. 1489
- Panel, oblong, Pinjra work, shisham wood. 1490
- Panel, square shape, Pinjra or carved open work, shisham  
wood. 1491

Model of a window made in the Shekhawati district of Jeypore, the carved frame work round the doors is excellent, and there is also partial lacquering on the same. Wood. Shekhawati, Jeypore.

1492

Panel, oblong, carved. Shekhawati work Jeypore.

1493

Panel.

1494

Panel.

1495

Candle-stick, lacquered wood. Burmah.

1496

Candle-stick, lacquered wood. Burmah.

1497

Thirty blocks of different patterns, used for printing Sangar chintzes, carved wood. Jeypore.

1498-1527

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### CASE No. CLXXI.

Model of the Irish Harp of Brian Boru. Presented by the Dublin Museum.

1528

Two tusks of an elephant which yield the ivory of commerce.

1529-30

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### SEMI-CIRCULAR CASE No. CLXXII.

*Containing Stuffed Fish.*

Caranx speciosus. No. 19. Madras. Forskal.

1531

Drepane Punctata. No. 10. Madras. Linnæus.

1532

<i>Coryphæna Hippurus.</i>	No. 3.	Madras.	Linnæus.	1533
<i>Lates Calcarifer.</i>	No. 1.	Madras.	Bloch.	1534
<i>Caranx Rottleri.</i>	No. 28.	Madras.	Bloch.	1535
<i>Serranus-flava-cæruleus.</i>	No. 4.	Madras.	Lacepede. Female.	1536
<i>Pristipoma Hasta.</i>	No. 6	Madras.	Bloch. Madras Museum.	1537
<i>Sphyræna Jello.</i>	No. 31	Madras.	Cuv. and Val.	1538
<i>Wallago Attu.</i>	No. 12.	Madras.	Schneider.	1539
<i>Platycephalus Insidiator.</i>	No. 5.	Madras.	Forskal.	1540
<i>Heniochus Monoceros</i>	No. 7.	Aden.	Cuv. and Val.	1541
<i>Mesoprion Malabaricus.</i>	No. 2.	Madras.	Schneider.	1542
<i>Muræna Punctata.</i>	No. 16.	Madras.	Richardson.	1543
<i>Corinemus Sancti-petri.</i>	No. 27.	Madras.	Cuv. and Val.	1544
<i>Scolopsis Japonicus.</i>	No. 34.	Madras.	Bloch.	1545
<i>Dioden Histrix.</i>	No. 9.	Madras.	Bloch.	1546



Pseudorhombus ri	No.	Madras.	1547
Chiloscyllium Plagiosum.	No. 25.	Madras. Muller & Henle.	1548
Elops Saurus.	No. 26.	Madras. Linnæus.	1549
Alausa Toli.	No. 29.	Madras. Cuv. and Val.	1550
Sixteen other fishes without name.			1551-66
One other fish.	Presented by H. H. the Maharaja.		1567
Two spiny Ant-eaters belonging to the order Monotermata of the Mammalia.			1568-9
One Lizard.			1570

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### BLACK SLOPE CASE No. CLXXIII.

*Containing Eggs of Rajputana Birds, &c.*

No.	
Numenius Phæopus, Linn.	The Whimbrel. Loc. 1571

No. <sup>1276</sup>  
862J.

Hæmatopus ostralegus, Linn.	The Oyster-catcher. Loc. 1572
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No.  $\frac{1428}{982J}$ .

*Sterna caspia*. The Caspian Tern. Loc. 1573

No.  $\frac{1208}{813J}$ .

*Gallus sonnerati*, Tem. The Grey Jungle Fowl. Loc. 1574

No.  $\frac{1445}{995}$ .

*Rhynchops albigollis*, Swains. The Indian Skimmer. Loc. 1575

No.  $\frac{1433}{985}$ .

*Sterna Seena*, Sykes. The Indian River Tern. Loc. 1576

No.  $\frac{1101}{119J}$ .

*Merops Leschenaulti*, Vieill. The Chestnut-headed Bee-eater. Loc. 1577

No.  $\frac{706}{262J}$ .

*Lanius Isabellinus*, Ehrenb. The Desert Shrike. Loc. 1578

No.  $\frac{1281}{824J}$ .

*Arboricola Torqueola*, Valenc. The Common Hill Partridge. Loc. 1579

No.  $\frac{1118}{129J}$ .

*Halcyon Smyrnensis*, Linn. The White-breasted Kingfisher. Loc. 1580

No.  $\frac{1174}{797}$ .

*Turtur Humilis*, Tem. The Red Turtle Dove. Loc. 1581

No.  $\frac{521}{423J}$ .

*Trochalopectum Cachinnans*, Jerdon. The Neilgherry  
Laughing Thrush. Loc. 1582

No.  $\frac{1004}{214J}$ .

*Eudynamys Honorata*, Linn. The Indian Koel. Loc. 1583

No.  $\frac{1026}{194J}$ .

*Megalæma Viridis*, Gmel. The Small Green Barbet. Loc. 1584

No.  $\frac{873}{694J}$ .

*Ploceus Phillipinus*, Lin. The Common Weaver Bird. Loc. 1585

No.  $\frac{957}{102J}$ .

*Cypselus Batassiensis*, Gray. The Palm Swift. Loc. 1586

No.  $\frac{1175}{798J}$ .

*Chalcophaps Indica*, Linn. The Emerald Dove. Loc. 1587

No.  $\frac{1116}{136J}$ .

*Ceryle Rudis*, Linn. The Pied Kingfisher. Loc. 1588

No.  $\frac{549}{401J.}$

*Pomatorhinus Ferruginosus*, Hodgs. The Ferruginous  
Scimitar Babbler. Loc.

1589

No.  $\frac{564}{413J.}$

*Garrulax Moniliger*, Hodgs. The Necklaced Thrush. Loc.

1590

No.  $\frac{374}{360J.}$

*Merula Simillima*, Jerd. The Neilgherry Ouzel. Loc.

1591

No.  $\frac{465}{460J.}$

*Otocompsa Jocosa*, Linn. The Red-whiskered Bulbul. Loc.

1592

No.  $\frac{761}{240J.}$

*Prionochilus Squalidus*, Burton. The Thick-billed Flower-  
pecker. Loc.

1593

No.  $\frac{1239}{832J.}$

*Turnix Plumbipes*, Hodgs. The Indo-Malayan Bustard  
Quail. Loc.

1594

No.  $\frac{1170}{794J.}$

*Turtur Senegalensis*, Linn. The Little Brown Dove. Loc.

1595

No.  $\frac{1241}{837J.}$

*Turnix Taigoor*, Tem. The Little Button Quail. Loc.

1596

No.  $\frac{538}{436J.}$

Argya Malcolmi, Sykes. The Large Grey Babbler. Loc. 1597

No.  $\frac{480}{347J.}$

Cinclus Asiaticus, Swains. The Himalayan Dipper. Loc. 1598

No.  $\frac{468}{456J.}$

Otocompsa Flaviventris, Tick. The Black-crested Yellow Bulbul Loc. 1599

No.  $\frac{364}{354J.}$

Geocichla Cyanonotus, Lath. The White-winged Ground Thrush. Loc. 1600

No.  $\frac{958}{102 \text{ bis.}}$

Cypselus Infumatus, Selater. The Eastern Palm Swift. Loc. 1601

Ostrich Eggs. 1602

Emu's Egg. Jeypore. 1603

Emu's Egg. England. 1604

Emu's Egg. South India. 1605

Two Eggs of the Crocodile. 1606

Eggs of thirty-four species of birds. 1607-40

## BLACK SLOPE CASE No. CLXXIV.

*Containing Clay Models of Vegetables.*

Sutton's improved English vegetables, suitable for cultivation in India. Presented by Messrs. Sutton & Sons, Reading and London.

Cabbage.	1641
Sutton's Hero of Lockinge Melon.	1642
York or Dunbar Regent Potato.	1643
Sutton's New Magnumbonum Potato.	1644
Two Sutton's Champion Scarlet short-horn Carrot.	1645
Conover's Colossal Asparagus (two in a basket).	1646
Giant Seville Longpod Beans (three pods in a basket).	1647
Runner beans (Phaseolus multiflorus).	1648
Runner beans (Phaseolus multiflorus).	1649
Sutton's Benham Park Melon.	1650
Sutton's King Cauliflower.	1651

- Egyptian dark red Turnip-rooted Beet (*Beta vulgaris*).  
1652
- Sutton's Improved Reading Onion (*Allium Cepa*).  
1653
- Sutton's Red-skinned Flourball Potato (*Solanum Tuberosum*).  
1654
- Globe Tripoli Onion.  
1655
- Royal Berks Marrow Peas, *Pisum Sativum*, (three pods in a basket).  
1656
- Telegraph Peas (three pods in a basket).  
1657
- Best of all Peas (*Pisum Sativum*) Sutton's Prince Leopold Peas (three pods in a basket).  
1658
- Canadian Wonder French Beans. Dwarf. (Three pods in a basket).  
1659
- Sutton's Giant Emerald Marrow Peas, *Pisum Sativum*, (three pods in a basket).  
1660
- Marvel Peas, *Pisum Sativum*, (three pods in a basket).  
1661
- Sutton's Prince Leopold Peas (three pods in a basket).  
1662
- James's Scarlet Intermediate Carrot (*Daucus Carota*).  
1663
- Ayton Castle Giant Leek (*Allium Porrum*).  
1664



	169
Tender-and-True Cucumber.	1665
Sutton's Berkshire Champion Cucumber.	1666
Improved Long Surrey Carrot ( <i>Daucus Carota</i> ).	1667
Greentop Six Weeks Turnip.	1668
Wood's Early Frame Radish, <i>Raphanus Sativus</i> , (seven in a basket).	1669
Long Red Chili ( five in a basket ).	1670
French Breakfast Radish ( six in a basket ). <i>Raphanus Sativus</i> .	1671
Hathaway's Excelsior Tomato <i>Lycopersicum Esculentum</i> , ( three in a basket ).	1672
Mixed Olive Radish, <i>Raphanus Sativus</i> , ( six in a basket ).	1673
Long Red Capsicum ( three in a basket ).	1674
Mixed Turnip Radish ( seven in a basket ).	1675
Blood-red Onion. <i>Allium Cepa</i> .	1676
Sutton's Improved Dark-red Beet. <i>Beta Vulgaris</i> .	1677
	1678

## WALL FRAME No. CLXXV.

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WALL FRAME No. CLXXVI.

Specimen of a Japanese Painting in water colours. Subject—Three Japanese figures and an elephant killing a serpent by the tusks with a *Mahaut* hurling a spear at it.

1679

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WALL FRAME No. CLXXVII.

Elements of Landscape Painting in water colours, explained and illustrated by means of printed diagrams of landscape and the samples of colours on a plate by Maison Basset, Paris.

1680

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WALL FRAME No. CLXXVIII.

Table of the Universal Perspectives, explaining and illustrating the art by means of printed diagrams, both plain and in colours, on Plate No. 26 by Bouasse Lebel, Paris.

1681

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WALL FRAME No. CLXXIX.

Specimen of a Japanese Art Painting in water colours. Subject—A Japanese gentleman smoking his Huka, his wife with the baby sitting in front, and two persons behind.

1682

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WALL SPACE No. CLXXX.

WALL SPACE No. CLXXXI.

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WALL SPACE No. CLXXXII.

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WALL SPACE No. CLXXXIII.

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WALL SPACE No. CLXXXIV.

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WALL SPACE No. CLXXXV.

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WALL FRAME No. CLXXXVI.

Races and Costumes of the principal people of the five quarters of the world, comparatively described and illustrated by means of printed diagrams in colours on Plate No. 1 by Bouasse Lebel, Paris.

1683

WALL SPACE No. CLXXXVII.

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## WALL FRAME No. CLXXXVIII.

The females of the five quarters of the world, presenting the physical characters which distinguish them and their national costumes, described and illustrated by means of printed diagrams in colours on Plate No. 2 by Bouasse Lebel, Paris.

1684

## WALL SPACES Nos. CLXXXIX &amp; CXC.

## WALL FRAMES Nos. CXCI &amp; CXCI.

Specimen of a Japanese Painting in water colours. Subject—The procession of a king, polo, elephant fight, review of the army, and other sports.

1685

## WALL FRAME No. CXCI.

Botanical Chart. Subject—The most remarkable examples of the Commercial and Industrial woods, classified under four heads, viz.—

1. Woods employed in carpentry (Nos. 1-40).
2. Woods used in the manufacture of the articles of luxury (Nos. 41-85).
3. Woods producing dyes.
4. Medicinal woods.

No. 170. Bouasse Lebel, Paris.

1686

## WALL FRAME No. CXCI.

Botanical Chart. Subject—The Cryptogams (Acotyledons), Sea-weeds, Shave-grass or Horse-tail, &c. No. 189. Bouasse Lebel, Paris.

1687

## WALL FRAME No. CXCV.

Botanical Illustrated Chart. The Cryptogams (Acotyledons). Heaths, Mosses, &c. No. 188. Bouasse Lebel, Paris.

1688

## WALL FRAME No. CXCVI.

Botanical Illustrated Chart. Exotic Fruits. No. 169. Bouasse Lebel, Paris.

1689

## WALL FRAMES Nos. CXCVII &amp; CXCVIII.

Specimen of a Japanese Art Painting in water colours. Subject—A procession, elephant fight, and boat races.

1690

## WALL FRAME No. CXCIX.

Botanical Illustrated Chart. Subject—Ornamental trees (shrubs and plants).

1691

## WALL FRAME No. CC.

Botanical Illustrated Chart. Plants with ornamental foliage, (plants of the plain and the greenhouse). No. 183. Bouasse Lebel, Paris.

1692

## WALL FRAME No. CCL.

Botanical Illustrated Chart. Ornamental water plants. No. 192. Bouasse Lebel, Paris.

1693

## WALL FRAME No. CCII.

Botanical Illustrated Chart. Useful Plants, Part I. No. 185. Bouasse Lebel, Paris.

1694

## WALL FRAME No. CCIII.

Specimen of a Japanese Art Painting in water colours.

1695

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## WALL FRAME No. CCIV.

Botanical Illustrated Chart. Useful Plants, Part II. Bouasse  
Lebel, Paris.

1696

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## WALL FRAME No. CCV.

Botanical Illustrated Chart. Vegetable Physiology. No.  
161. Bouasse Lebel, Paris.

1697

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## WALL FRAME No. CCVI.

Specimen of a Japanese Art Painting in water colours.  
Subject—Elephant and Sepoys.

1698

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## WALL FRAME No. CCVII.

Botanical Illustrated Chart. Classification of Plants after  
the system of Jussieu with a general outline and vertical  
section of fruits or flowers and seeds. No. 163. Bouasse  
Lebel, Paris.

1699

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## WALL FRAME No. CCVIII.

Botanical Illustrated Chart. Classification of Plants. No.  
162. Bouasse Lebel, Paris.

1700

## WALL FRAME No. CCIX.

1701

## WALL FRAME No. CCX.

1702

## WALL FRAME No. CCXI.

Photograph. Subject—Midday from the Hermitage, St. Petersburg. Holy Family in the foreground, Claude Gelée (Lorraine).

1703

## SMALL SHOW CASE No. CCXII.

*Clay Models of Fishes made at the School  
of Art, Calcutta.*

447. *Perilampus labuca*. Day. Fau. Br. Ind. I. 360.

Vern.—Bankoe, Oorjah ; Nga-me-loung, Burm. ; Layn buka and dankena, Beng. ; Daunahrah, Hind. ; Moh-do-nee-konah and har-bag-gi, Assam. ; Coon-che-li-e, N.-W. Provinces.

Habitat—Ganjam, Orissa, Bengal, Central India, Assam, and Burma, attaining at least  $3\frac{1}{2}$  inches in length.

1704

449. *Chela gora*, Day. Fau. Br. Ind. I. 362.

Vern.—Hum catchari, Oorjah ; Ghora chela, Beng. ; Chel-hul, Hind. ; Bounchi and Kundul, Punjab.

Habitat—Sind, Punjab, North-Western Provinces, Bengal, Orissa, and Assam ; attaining at least 9 inches in length.

1705



463. *Labeo angra* ; Day. Fish. Ind. 541. Fau. Br. I. 267.

Vern.—Kharsa, Mochua, Hind. ; Paungsi, Morala, Beng. ;  
Lassim, Assam ; Nga-lu, Burm.

Habitat—The rivers of Bengal, Orissa, Assam and Burma.  
The several species of this genus are employed as food by  
the natives. Some such, as the Rohu, are also highly  
esteemed by Europeans.

1706

312. *Ambassis ranga* ; Day. Fish. Ind., 51 ; Fau. Br. Ind.  
I., 485.

Vern.—Chandi, Beng. ; Chandi, Lal-Chandi, Ooriah ; Chandi,  
N.-W. P. ; Pidah, Sind ; Gand-richii, Mar. ; Nga-tenyet,  
Burm.

Habitat—Throughout India and Burma.

1707

Potka.

1708

Prawn (*Peneus Setiferus*), belonging to the Family *Palæ-*  
*mon* of Crustacea. It is much used as food.

1709

492. *Macrones Tengara* ; Day. Fish. Ind., 447 ; Br. Ind., I.,  
156.

Vern.—Kuttahrah, Hind. ; Tengara, Tengrah, Beng. ; Bikun-  
tia, Ooriah ; Ting-ga-rah, Assam. ; Karral, Ting-ga-rah,  
Pb. ; Saku-jella, Tel. ; Nga-zin-zin, Burm.

Habitat—Northern India, the Punjab, and Assam.

1710

412. *Clarias Magur* ; Day. Fish. Ind., 485 ; Fau. Br. Ind.,  
I. 115.

Vern.—Magur, Mahgur, Beng. ; Maugri, Patna and Mon-  
ghir ; Magurah, Ooriah ; Kug-ga ; Yerri-vale, Tam. ;  
Marpu, Vizag. ; Nga-khu, Burm. and Mugh.

Habitat—Fresh and brackish waters of the plains of India, Burma, Ceylon, and the Malay Archipelago. As food this fish is deemed highly nourishing, and is extensively salted in Burma.

1711

*Engraulis indicus*. Whitebait of Europeans in India.

Vern.—Netteli, teran guni, Tam., Nattu, Tel. ; Bunga-ayer, Badah, Malays ; Ju-vu-cart-dah, And.

Habitat—Seas and tidal rivers of India.

1712

Pakal.

1713

Baylay.

1714

Kholsay.

1715

Putti, *Barbus Vittatus*. Vern.—Kuli, Hind ; Putti.

Habitat—The rivers of Kutch, Mysore, Madras, Wynaad, Malabar, and Ceylon.

1716

Soral Pootee.

1717

Khoyra.

1718

470. *Labeo gonius* ; Day. Fish. Ind., 537 ; Fau. Br. Ind. I., 267.

Vern.—Cursa, Colluse, Hind. ; Kurehi, Kursi, Goni, Beng. ; Cursua, Ooriah ; Courie, Bahtur, Assam. ; Mosul, Tel. ; Cir-re-oh, Sind. ; Nga-pay, Nga-dane, Nga-lu, Burm.

Habitat—The Indus in Sind, through the North-Western Provinces, Bengal, and Orissa, to Ganjam, as low as the Kistna ; also Assam and Burma. It is a large fish, attaining the length of 5 ft., and is much used for stocking tanks.

1719

*Eutropiichthys Vacha*, Day. Fish. Ind. I, 128.

Butchua and Nandi butchua, Ooriah ; Chel-lee, Sind ; Nee much, North-Western Provinces ; Vacha, Beng. ; Nga-myen-kouban, Katha boug, and Nga-myeey-ying, Burm.

Habitat—From the Panjab through the large rivers of Sind, Bengal, and Orissa. This species attains upwards of a foot in length. It is good eating.

1720

435. *Barilius bola*. Day. Fau. Br. Ind. I., 352.

Vern.—Bugguah, Ooriah ; Korang, Assam. ; Bola, Beng. ; Buggarah, Hind.

Habitat—Orissa, Bengal, North-Western Provinces, Assam, and Burma ; attaining at least a foot in length ; one killed in Assam by Mr Haunay is stated to have weighed 5 lbs. A very game fish, takes the fly well, and is one of those termed Rajah Mas, or “chief of the fishes,” in the Assam rivers.

1721

466. *Labeo Calbasu*, Day. Fish. Ind., 540 ; Fau. Br. Ind. I., 265.

Vern.—Kala-beinse, Hind. ; Kalbasu, kundna, cuggera, Beng. ; Nulla-gandu-menu, Tel. ; Kala-beinse, Ooriah ; Di ; Pb. ; Di-hi, Sind ; Dai, Cutch ; Kurri-minn, Kan. ; Mahli, Assam. ; Nga-nek-pya, Nga-nu-than, Nga-ong-tonga, Burm.

Habitat—The fresh waters of the Panjab, Sind, Cutch, the Deccan, Southern India, and Malabar, and from the Kistna through Orissa, Bengal and Burma.

1722

486. *Macrones aor* ; Day. Fish. Ind., 444 ; Fau. Br. Ind. I., 479.

Vern.—Aor, Beng. ; Alli or Addi, Arriah-alli, gugah-alli, Ooriah ; Singala, Sang-go-ah, Pb. ; Chamblu-kelleti, Tam. ; Mukul-jellah, Muti-jellah, Tel. ; Singhari, Sind ; Singhala, Mar. ; Nga-foug, Burm.

**Habitat**—Rivers throughout Sind and India to Burma. The species of macrone here enumerated are employed as food by the poorer classes, but are of inferior quality, being rather insipid.

1723

511. *Notopterus Kaporat* ; Day. Fish. Ind., 653 ; Fau, Br. Ind. I., 406.

**Vern.**—Moh, Hind. ; Pholoe, Beng. ; Pulli, Ooriah ; Ambutan-wahlah, Chota-wahlah, Tam. ; Kau-du-li, Assam. ; Moh, but, purri, Pb. ; Nallak-tattah, Mysore ; Nga-hpeh, Nga-phe, Burm.

**Habitat**—Fresh and brackish waters of India, it grows to two feet or more in length, and is salted in Burma.

1724

568. *Saccobranchus fossils* ; Day. Fish. Ind., 486 ; Fau. Br. Ind. I., 125. The Scorpion fish.

**Vern.**—Bitchu-ka-mutchi, Singi, Hind. ; Singgi, Singhi, Beng. ; Singi, Ooriah ; Singi, Shini, Assam. ; Lohar, Sind. ; Lahurd (young), Nullie (adult), Pb. ; Thayli, Tharli, Tam. ; Marpu, Tel. ; Kahri-min, Malay ; Nga-gyi, Burm. and Mugh.

**Habitat**—The fresh waters of India, Ceylon, Burma, and Cochin China, attaining one foot or more in length. It is considered exceedingly wholesome and invigorating by natives though in some places deemed impure by the Brahmins. In Burma it is salted.

1725

Baween.

1726

Gangdara.

1727

*Anabas Scandens*. Climbing fish.

**Vern.**—Coi, Beng. ; Coi, Cown, Uriya ; Coi, Assam. ; Sennal, Pauni-eyri, Tam. ; Undi-Colli, Malay ; Kawaya, Sing. ; Nga-pri, Mugh. ; Nga-byas-ma, Burm. ; Haruan, Malays.

**Habitat**—Estuaries and fresh waters of India, Ceylon, and Burma.

1728

508. *Nandus Marmoratus*; Day. Fish. Ind., 129; Fau. Br. Ind. II., 82.

Vern.—Vadhul, Hind.; Latha, Gudtha, Beng.; Bodosi, Gossiporah, Ooriah; Gad-gud-di, Bad-vad-hi, Assam.; Mussoassah, Pb.; Septi, Issopitay, Tel.; Mutahri, Malay.

Habitat—Fresh and brackish waters of India and Burma, common in ditches and inundated fields.

1729

562. *Rita buchhanani*; Day. Fish. Ind., 454; Fau. Br. Ind. I., 165.

Vern.—Rita, Beng.; Muss-ayahri, Cunta-gagah, Ooriah; Gudla-jella, Tel.; Nga-htway, Burm.

Habitat—The rivers Indus, Jumna, Ganges, and Irrawadi. This fish, though a very fowl-feeder, is esteemed as food by the natives. All the species of this genus are employed for food by the lower classes, and are valuable from their capability of retaining life long subsequent to their removal from water, owing to which they can be carried fresh for long distances.

1730

474. *Labeo Rohita*; Day. Fish. Ind., 538; Fau. Br. Ind. I., 262. The Roho or Rohu.

Vern.—Rui, Rowi, Rohita, rui-mutchli, Beng.; Rubu, Ooriah; Rui, Assam.; Nga-myyit-chin, Nga-myyit-tsan-ni, Burm.

Habitat—Fresh waters of Sind, and from the Punjab through India and Assam to Burma. A large fish of three feet or more in length, esteemed excellent as food, and propagated with care in ponds in Bengal; yields oil, for which it is principally employed in the North-West Provinces. U. C. Dutt remarks that the bile of this species is employed in medicine by the Hindus.

1731

*Callichrone pabda*; Day. Fish. Ind. I., 133.

Vern.—Pallu, Punj.; Pabda, Beng.

Habitat—Punjab in the affluents of the Indus and along that river to its termination, at Hardwar where the Ganges emerges from the Himalayas and along its waters in the Gangetic provinces, also Orissa, Darjeeling, and the

## Brahmaputra in Assam.

1732

*Ophiocephalus Striatus*. The Walking Fish or Murrel.

Vern.—Morrul, Murl, Dheri Murl, Hind.; Sol, Chena, Beng.; Sola, Uriya, Verarlū, Currupu Verarl, Tam.; Sowarah, Kora, Tel.; Muttah, Vizagapatam; Lulla, Sing.; Nga-ain-di, Mugh.; Nga-yaw, Burm.; Ikanharuan, Malays.

Habitat—Fresh waters throughout the plains of India.

1733

## Balkay.

1734

414. *Clupea Ilisha*; Day. Fish Ind. 640; Fau, Br. Ind. I, 276. The Sable or Shad Fish; Hilsa.

Vern.—Hilsa, Ilisha, Beng.; Ruri of the Ganges; Dumra of the Indus; Pulla, Sind.; Ulum, Tam.; Pulasā, Pulasu, or Pulasah, Tel.; Olammin, Madras; Nga-tha-louk, Burm.; Ikan-truboh, Malay.

Habitat—Persian Gulf and Coasts of India and Burma, passing up the large rivers to breed.

These fishes are excellent as food until they have deposited their ova, when they become thin and positively unwholesome. Though highly esteemed for the table, they are rather rich and difficult of digestion.

1735

## Gorcha.

1736

## Gojar.

1737

501. *Mugil Planiceps* (tade); Day. Fish. Ind. 350; Fau. Br. Ind. II., 344. Mullet.

Vern.—Bangaon, Beng.; Jumpul, Malay.

Habitat—Seas, estuaries, and tidal rivers of India. Common in the Hooghly.

1738

510. *Notopterus Chitala* ; Day. Fish. Ind. 654 ; Fau. Br. Ind. I., 407.

Vern.—Chitala, Chitol, Beng. ; Chitul, Ooriah ; Si-tul, Assam. ; Gundun, Sind.

Habitat—A large fish, attaining 4 feet or more in length, found in the fresh waters of Sind, Lower Bengal, Orissa, Assam, Burma, and Siam. Hamilton Buchanan writes:—“The belly is uncommonly rich and well flavoured, but the back contains numerous small bones, and a strong prejudice exists against using this fish as food, owing to its being supposed to live on human carcasses.”

1739

332. *Catla buchanani*. Day. Fau. Br. Ind. I., 287.

Vern.—Botche, Telugu ; Catla, Bengali, Hind., and Pb. ; Barkur, Ooriah ; Nga-thaing, Burm. ; Tambra, Hind., in Bombay ; Boassa, Hind. in N.-W. Provinces ; Taylee, Sind.

Habitat—Sind, Punjab, throughout India to the Kistna and eastwards through Bengal and Burma to Siam. This fish attains at least 6 feet in length, and is much esteemed as food when not exceeding 2 feet, larger ones are coarse. It resides in fresh or brackish water, being found within tidal influence.

1740

Daynto Potee.

1741

Selinda.

1742

410. *Cirrhina Mrigala* ; Day. Fish. Ind. 547 ; Fau. Br. Ind. I., 278.

Vern.—Mrigala, Naim, Hind. ; Rewah, Beng. ; Mrigale, Mirrgah, Ooriah ; Mor-ah-ki, Sind. ; Nga-kyin, Nga-gyein, Burm. ; Mrigal, Mrigala, Sans.

Habitat—The rivers and tanks of Bengal, the North-Western Provinces, the Punjab, Sind, Cutch, the Deccan and Burma. An excellent fish for stocking tanks.

1743



## WALL BOARD No. CCXIII.

Four stuffed fishes.

1744-7

## WALL BOARD No. CCXIV.

Five stuffed fishes.

1748-52

## WALL FRAME No. CCXV.

Leather, the articles employed in tanning it, and specimens of leather of the various animals, of Morocco of all qualities from different countries and of parchments. Object Lesson Card, No. 94. Emile Deyrolle, Paris.

1753

## WALL FRAME No. CCXVI.

Wool from different countries and specimens of all kinds of wool, threads and stuffs made by them. Object Lesson Card, No. 75. Emile Deyrolle, Paris.

1754

## WALL FRAME No. CCXVII.

Specimens of hair or wool suitable for textiles obtained from the Cashmere goat, Angora goat, Vicuña, the Alpaca, and the dromedary with samples of fabrics made by them as well as the illustrations of the animals. Object Lesson Card. No. 76. Emile Deyrolle, Paris.

1755

## WALL FRAME No. CCXVIII.

Illustration of the weaving machine showing the uses of the different parts as well as an account of the process of weaving fabrics. Card. No. 77. Emile Deyrolle, Paris.

1756

## WALL FRAME No. CCXIX.

Stuffed specimen of a fish.

1757

## WALL FRAME No. CCXX.

Natural History Object Lesson Card. No. 13. Specimens of shell with nacre, pearl mussel shell and artificial shell with an account of the Pearl oyster and the Pearl mussel from which the pearls are obtained. Oliver and Boyd, Edinburgh.

1758

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## WALL FRAME No. CCXXI.

Natural History Object Lesson Card. No. 14. Specimens of sponge, red coral and white coral with an account of the marine animals of that name which yield those substances. Oliver and Boyd, Edinburgh.

1759

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## WALL FRAME No. CCXXII.

Cox and Co.'s Practical Object Lessons. Series 7. Silk making, showing the various stages in the manufacture of embroidering and sewing silk, with specimens of silk cocoons, raw silk, &c., Kindergarten Dépôt, 99 and 101, New Oxford Street, London.

1760

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## WALL FRAME No. CCXXIII.

Cox and Co.'s Practical Object Lessons. Series 18. Specimens of sponge from the principal sponge fisheries in the World. London.

1761

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## WALL FRAME No. CCXXIV.

Natural History Object Lesson Card, No. 9. The silk-worm, specimens of cocoon, floss silk, silk, satin, velvet, and crape, with the history of the formation of the cocoon and its products. Oliver and Boyd, Edinburgh.

1762

## WALL FRAME No. CCXXV.

Natural History Object Lesson Card. No. 10. The Honey-bee, specimens of unbleached wax, white wax, and coloured wax candle, and how they are procured. Oliver and Boyd, Edinburgh.

1763

## WALL FRAME No. CCXXVI.

Natural History Object Lesson Card. No. 5. The goat, specimens of mohair chamois leather, morocco leather, and kid leather, with a history of the goats of the different countries celebrated for their woollen manufacture and the process of preparing their skin for manufacture. Oliver and Boyd, Edinburgh.

1764

## WALL FRAME No. CCXXVII.

Natural History Object Lesson Card. No. 6. The rabbit, specimens of its fur and felt with a short account of the animal and the process of preparing furs. Oliver and Boyd, Edinburgh.

1765

## WALL FRAMES Nos. CCXXVIII &amp; CCXXIX.

1766-7

## WALL FRAME No. CCXXX.

Natural History Object Lesson Card. No. 1. The ox and cow, specimens of horn-comb, button, bone-spoon, button, bend leather, loaf-sugar, and glue, with an account of the animal showing the use of its parts in the arts and manufactures. Oliver and Boyd, Edinburgh.

1768

## WALL FRAME No. CCXXXI.

Natural History Object Lesson Card. No. 2. The calf, specimens of skin with hair, tanned leather, shoe leather, dyed leather, and gelatine, with an account of the process of manufacturing leather. Oliver and Boyd, Edinburgh.  
1769

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## SHOW CASE No. CCXXXII.

*Containing Clay Models of Snakes.*

Nineteen glass bottles, containing specimens of poisonous snakes preserved in spirit. All found in Jeypore.  
1770-88

Model of the head of a Viper, showing the poisonous fangs, and the poisonous glands. Auzoux, Paris.  
1789

The Sea-snakes (Hydrophidæ) are found in seas of the warmer parts of the Eastern Hemisphere in the Pacific, Indian, and Australian oceans. They live in droves, and their tail is adapted for swimming. They are viviparous and are all very poisonous.

Hydrophis Nigrocincta (sea-snake).  
Habitat—Bay of Bengal and Straits of Malacca.  
1790

Hydrophis Coronata (sea-snake).  
Habitat—Coast of Bengal.  
1791

Hydrophis Cloris (sea-snake).  
Habitat—Sunderbans, Madras, and Pegu.  
1792

Hydrophis Stricticollis (sea-snake).  
Habitat—District of Sunderbans, Madras, and the Coast of Pegu.  
1793

*Enhydrina Bengalensis* (sea-snake).

Habitat—Persian Gulf, Coasts of India and Burma, Malay Archipelago and New Guinea.

1794

*Hydrophis Jerdonii* (sea-snake).

1795

*Hydrophis Robusta* (sea-snake). It is found on the coast of the mainland of India and in the Archipelago.

1796

*Hydrophis Crassicolis* (sea-snake). It is found in the tidal streams near Calcutta.

1797

*Hydrophis Cyanocincta* (sea-snake). It is found on the Coasts of Ceylon, Madras, in the Bay of Bengal, in the East Indian Archipelago, and in the seas of China and Japan.

1798

*Hydrophis Curta* (sea-snake).

1799

*Hydrophis Nigra* (sea-snake). It is found in Pooree and Cuttack.

1800

*Hydrophis Stewartii* (sea-snake). It is found in Pooree and Cuttack.

1801

*Trimeresurus Erythrurus* (terrestrial and arboreal snake).  
Family *Crotalidæ*.

1802

*Trimeresurus Monticola* (terrestrial and arboreal snake).  
Family *Crotalidæ*.

Habitat—Central and Eastern Himalayas, Hills of Assam, Upper Burma, Yunnan, Muleyit, Tenasserim, Penang, and Singapore.

1803

*Trimeresurus Andersonii* Pit viper (terrestrial snake).  
Family *Crotalidæ*. It is found in India.

1804

*Trimeresurus Strigatus* (terrestrial snake). Family Crotalidæ.

Habitat—From the Bombay Hills to the Anamalais and Nilgris.

1805

*Halys Himalayanus* (terrestrial and arboreal snake). Family Crotalidæ. Found all over the North-Western Himalayas.

1806

*Pelamis bicolor* (sea-snake). Hydrophidæ. It is found in the Indian Ocean, the Pacific, and the Persian Gulf.

1807

*Hypnale Nepa, Karawala*, (terrestrial and arboreal snake). Found in Ceylon and in the Western Ghats of India.

1808

*Platurus Fischeri* (sea-snake). Found in the Bay of Bengal and Chinese Seas.

1809

*Callophis Maccellandii* (terrestrial and arboreal snake). Family Elapidæ. It is found in Nepal, Sikkim, Assam, Burma and Southern China.

1810

*Bungarus Fasciatus* (terrestrial snake). Family Elapidæ. "The Raj Sanp" of Northern India. It is found in Bengal, South India, Assam, Burma, Southern China, Indo-China, Malay Peninsula, Sumatra, and Java.

1811

*Bungarus Cæruleus*, Krait, Gedi Paragoodoo, (terrestrial snake). Family Elapidæ. It is allied to *Naja*, but its neck is not dilatable. It is found in all parts of India, and destroys many lives.

1812

*Daboia Russellii*, Chain Viper. Family Viperidæ. It is a terrestrial snake, and is viviparous. It is very deadly and is widely distributed over India. Its head is covered with small scales, and there is no pit between the eye and the nose.

1813

*Echis Carinata* (terrestrial snake). Family *Viperidæ*. It is found in the sandy districts of North Africa, South-Western Asia, and India.

1814

*Trimeresurus Carinatus*, Pit Viper, (terrestrial snake). Family *Crotalidæ*. Various species of this snake are found in India.

1815

*Trimeresurus Anamallensis*, Pit Viper, (terrestrial snake). Family *Crotalidæ*. It is found in the Anamalai Hills.

1816

*Naja Tripudians*, Cobra or spectacled snake, Cobra-di-Capello, (terrestrial snake). Family *Elapidæ*. Its neck is dilatible into a hood. It is a most deadly snake, and is found all over India.

1817

*Naja Tribudians*, Cobra or spectacled snake, Cobra-di-Capello (terrestrial snake). Family *Elapidæ*.

1818

*Naja Tripudians*, Cobra or spectacled snake, Cobra-di-Capello, (terrestrial snake). Family *Elapidæ*.

1819

*Naja Tripudians*, Cobra or spectacled snake, Cobra-di-Capello, (terrestrial snake). Family *Elapidæ*.

1820

*Naja Tripudians*, Cobra or spectacled snake, Cobra-di-Capello, (terrestrial snake). Family *Elapidæ*.

1821

*Naja Tripudians*, Cobra or spectacled snake, Cobra-di-Capello, (terrestrial snake). Family *Elapidæ*.

1822

*Naja Tripudians*, Cobra or spectacled snake, Cobra-di-Capello, (terrestrial snake). Family *Elapidæ*.

1823



Ophiophagus Elaps (arboreal snake). Family Elapidæ.  
The great "Hamadryad." This form ( Dusky variety ) is  
well known in India and the Indian Archipelago.

1824

Naja Tripudians, Cobra or spectacled snake. Cobra-di-  
Capello. Family Elapidæ.

1825

Naja Tripudians, Cobra or spectacled snake. Cobra-di-  
Capello.

1826

### WALL FRAME No. CCXXXVIII.

Object Lesson Card. Animal Kingdom. No. 3. The Sheep.  
Specimens of sheep skin with wool, worsted thread, wollen  
cloth, worsted cloth, flock paper, Roan and Catgut, with  
a description of the manufacture of the above articles.  
Oliver and Boyd, Edinburgh.

1827

### WALL FRAME No. CCXXXIX.

Object Lesson Card. Animal Kingdom No. 4. The Horse.  
Specimens of horse hair, hair cloth, Prussiates, Prussian  
Blue, and buttons, with a description of the variety of  
the horse and its parts from which the above articles are  
manufactured. Oliver and Boyd, Edinburgh.

1828

### WALL FRAME No. CCXL.

Fish ( Vertebrata ). Explained and illustrated by means of  
coloured diagrams of the anatomy of the type examples,  
and specimens of shark skin, isinglass, cod liver oil, and  
three artificial pearls of whitebait colour made from the

silver scales, the last two only of which are exhibited.  
Card No. 92. Emile Deyrolle, Paris.

1829

### WALL FRAME No. CCXLI.

Reptiles. Explained and illustrated by means of coloured diagrams of some of the type examples and real specimens of the skins of the snake and the crocodile, and the scale of a tortoise. Card No. 93. By Emile Deyrolle, Paris.

1830

### WALL FRAME No. CCXLII.

Birds. Described and explained, as regards their usefulness, by means of real samples of their natural products and their art manufactures. Object Lesson Card No. 7. Oliver and Boyd, Edinburgh.

1831

### WALL FRAME No. CCXLIII.

The Whale. Described and explained as regards its usefulness by means of a printed illustration of the animal in black, and specimens of the animal's products employed in art manufacture. Object Lesson Card No. 8. Oliver and Boyd, Edinburgh.

1832

### LARGE BLACK SHOW CASE No. CCXLV.

*Containing Clay Models of Animals and Jeypore  
Tradesmen connected with the Animal Kingdom.*

Bear.

1833

Elephant.	1834
Camel.	1835
Tiger.	1836
Monkey with her young.	1837
Rhinoceros.	1838
Jackal.	1839
Deer or Antelope.	1840
Buffalo.	1841
She-goat.	1842
Ram.	1843
Ass.	1844
Shoe-maker.	1845
Bearer.	1846
Barber, shaving. Jeypore.	1847
Barber, shaving. Trichinopoly.	1848

	193
Pearl-borer. Jeypore.	1849
Pearl-borer.	1850
Man selling necklaces of beads and false pearls. Jeypore.	1851
Seller of the coral necklaces. Jeypore.	1852
Wandering native confectioner. Jeypore.	1853
Wandering Mohammadan confectioner. Jeypore.	1854
A Hindu sweatmeat seller. Jeypore.	1855
A Baniya selling curd, milk, and other corn preparations for meals in his shop.	1856
Shoe-seller. Jeypore.	1857
Maker of native shoes. Jeypore.	1858
Butcher. Jeypore.	1859
Cook Mohammadan or Khansama.	1860
Mohammadan Cook roasting Kabab. Jeypore.	1861
Shop of a Mohammadan Bhatiyara or Khansama. Jeypore.	1862

Shop of a Baniya, selling sweetmeats and other eatables with  
a beggar appearing to torture himself to extort alms.  
Jeypore.

1863

Shop of a Baniya, selling ghi and two beggars in front to  
extort alms.

1864

Comb-makers at work. Jeypore.

1865

Shoe-makers at work with their wives who are also assisting  
them.

1866

Shop of shoes with a couple of customers.

1867

1868

1869

1870

1871

Oil bottle. Skin. Peshawar and Cabul.

1872

Oil bottle. Skin. Peshawar and Cabul.

1873

Oil bottle. Skin. Peshawar and Cabul.

1874

Oil bottle. Skin. Peshawar and Cabul.

1875

Oil bottle. Skin. Peshawar and Cabul.

1876

Oil bottle. Skin. Peshawar and Cabul.

1877

## WALL FRAME No. CCXLVII.

Object Lesson Card. No. 11. The Cochineal and Lac Insects. Specimens of dried Cochineal insects, red cloth, lac, and sealing wax, with a description of the process of manufacturing Carmine, Shell-lac, and Lac dye. Oliver and Boyd, Edinburgh.

1878

## WALL FRAME No. CCXLVIII.

Mollusca. Described and illustrated by means of real specimens of their natural products and their use in Art manufactures. Object Lesson Card No. 12. Oliver and Boyd, Edinburgh.

1879

## WALL FRAME No. CCXLIX.

Cox and Co.'s Practical Object Lessons. Series No. 9. Glove making exhibiting the various processes in the manufacture of Leather and Gloves. London.

1880

Cox and Co.'s Practical Object Lessons. Series No. 12. Leather. Specimens of skin dressed, dyed, tanned, &c. London.

1880 bis.

## WALL FRAME No. CCL.

Cox and Co.'s Practical Object Lessons. Series No. 8. Wool. Exhibiting the various processes in the manufacture of knitting wool. London.

1881

Cox and Co.'s Practical Object Lessons. Series No. 13. Manufacture of British combs with specimens of the pure horn up to the completed comb. London.

1881 bis.

## ROUND WALL BOARD No. CCLI.

Stuffed fish.

1882

## WALL BOARD No. CCLIV.

Five stuffed fishes.

1883-7

## WALL BOARD No. CCLV.

Seven stuffed fishes.

1888-94

## WALL FRAME No. CCLVI.

Map of India, No. 12, showing the animal products. By  
John Bartholomew & Co.

1895

## WALL FRAME No. CCLVII.

Set of Tail feathers of the Lyre bird (Menura Superba). These birds are found principally in the rocky gullies of New South Wales (Australia). They run very fast and fly little. They are generally considered to belong to the Tenuirostres group of birds. The bird is about the size of a pheasant. Presented by the Rev. G. Macalister, M. A., of Jeypore.

1896

504 Glass stoppered bottles in the 16 teak wood carved self-cases fastened to the walls of the room.

1897-2400



## SMALL BLACK SHOW CASE No. CCLVIII.

*Containing Models of Vehicles.*

Model of a four-wheeled bullock cart, <i>Rath</i> , with trappings.	2401
Model of a boat (Indian).	2402
Model of a bullock cart, exhibited at the Bombay Art Society's Industrial Art Exhibition by G. V. D.	2403
Model of a bullock cart.	2404
Model of a bullock cart.	2405
Model of a boat. Burmah.	2406
Model of a boat. Trichinopoly.	2407
Model of a bullock cart, <i>Chhakra</i> or <i>Kothi gaddha</i> .	2408
Model of a boat. Trichinopoly.	2409
Model of a bullock cart, exhibited at the Bombay Art Society's Industrial Art Exhibition.	2410
Model of a Catamaran or surf-boat from Galle, Ceylon.	2411
Model of a bullock cart.	2412

## SMALL BLACK SHOW CASE No. CCLIX.

Model of a Farm house in Bengal to manufacture sugar.  
Clay and straw. Krishnagar.

2413

Head with a helmet of chain and plate armour, full size  
model in papier-mache by Kishen Pujari, Ghat Gate,  
Jeypore.

2414

Head with a helmet of chain and plate armour, full size  
model in papier-mache by Kishen Pujari, Ghat Gate,  
Jeypore.

2415

Head with a helmet of chain and plate armour, full size  
model in papier-mache by Kishen Pujari, Ghat Gate,  
Jeypore.

2416

Head with a helmet of chain and plate armour, full size  
model in papier-mache by Kishen Pujari, Ghat Gate,  
Jeypore.

2417

Head with a helmet of chain and plate armour, full size  
model in papier-mache by Kishen Pujari, Ghat Gate,  
Jeypore.

2418

Head with a helmet of chain and plate armour, full size  
model in papier-mache by Kishen Pujari, Ghat Gate,  
Jeypore.

2419

## SMALL BLACK SHOW CASE No. CCLX.

Complete model of a well to illustrate the mode of watering  
fields. Clay and leather.

2420

	199
Model of a horse composed of several human figures. Clay.	2421
Poona figures. "Scene at a well."	2422
Specimen of pottery. Clay.	2423
Model of a human head. Raw papier-mache.	2424
Model of a human head. Raw papier-mache.	2425
Specimen of pottery. Clay.	2426

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## LARGE BLACK SHOW CASE No. CCLXI.

### *Containing Clay Models of Jeypore Trades connected with the Vegetable Kingdom.*

Models illustrative of the occupations, industries, and domestic life of the people of North India.

Weaver.	2427
Grass seller or Grass cut.	2428
Gardener, <i>Mali</i> .	2429
Gardener, <i>Mali</i> .	2430
Cart, loaded with husks of corn and drawn by a pair of bullocks.	2431

A villager, selling his corn in the city.	2432
Wood seller who cuts wood in the forests and brings it for sale in the market.	2433
A man stringing jewels in silk or cotton threads. <i>Patwa.</i>	2434
Saddle seller.	2435
Seller of cotton cords and baskets.	2436
Seller of cotton spindles.	2437
Cotton spindler.	2438
Cotton spinner, stuffing cotton.	2439
Wool in a cloth.	2440
Tradesman (Baniya) selling bales of cotton.	2441
Pipe-maker.	2442
Cocoanut Hookah seller with wooden pipes.	2443
Corn-grinder.	2444
Kitchen-requisite Seller's shop.	2445
Baniya, selling parched gram, &c., ready for eating.	2446

	201
Seller of pulse.	
	2447
Grain seller.	
	2448
Grocer's shop.	
	2449
Kite-maker, with specimens of kites and balls of cotton thread for sale.	
	2450
Dyers at work.	
	2451
Woman tying knots for making the "Tie and Dye" cloths or <i>Bandhna</i> cloths.	
	2452
Shop for stamping cloth with gold or silver, with a man at work.	
	2453
Embroiderers at work.	
	2454
Needle-worker, <i>Rafugar</i> , darner at work.	
	2455
Embroiderer, <i>Kasidagar</i> at work.	
	2456
Darner, <i>Rafugar</i> at work.	
	2457
Tailor's shop, with a number of ready made shirts and caps and customers.	
	2458
Tailor, prepairing caps.	
	2459
Female gardener, selling garlands of flowers.	
	2460

Pipe-fitter's shop.	2461
Ready Tobacco-seller.	2462
Betel-seller, male.	2463
Betel-seller, female.	2464
Fan-seller, with fans made of palm leaves	2465
<i>Manihari</i> , fitting bangles, her husband by her side manufacturing lac bangles.	2466
Maker of Lac bracelets.	2467
Lac bracelet maker's shop.	2468
Chintz-maker, <i>Chheenpd</i> , one who stamps cloth.	2469
Oilman's mill at work and the owner selling oil.	2470
Kitchen requisite seller's shop, with a beggar in front appearing to torture himself to extract alms.	2471
Betel-seller's shop, with two beggars in front playing music with small sticks in the hand.	2472
Grocer's shop, with a beggar appearing to torture himself to extract alms.	2473
Draper's shop.	2474

Draper's shop.

2475

Perfumer's shop, with a beggar lying in front having a stone slab on his breast with a view to torture himself to extract alms.

2476

Turban-binder, with two dancers in front, one playing on cymballs and the other whirling a salver on the tip of a stick.

2477

Tobacco shop.

2478

Shop of a draper.

2479

Gardener.

2480

Shop of a perfumer.

2481

Gardener.

2482

Shop of eatable herbs and fruits.

2483

Shop of eatable herbs.

2484

Gardener, selling melons and water-melons.

2485

Gardener with a *dali*.

2486

A man selling fresh fruits.

2487

Wandering betel-seller.

2488



Book-seller.	2489
Seller of condiments.	2490
Shop of lacquer work.	2491
A man selling wooden toys of Jeypore lacquer work.	2492
Comb-seller.	2493
Carpenter.	2494
Carpenter.	2495

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## SMALL BLACK SHOW CASE No. CCLXII.

### *Containing Characters in Clay.*

Woman of South India.	2496
Peon, South India.	2497
Merchant, South India.	2498
Broker, South India.	2499
A Mahratta man.	2500
A Parsee man.	2501

	205
A Parsee man.	2502
A Parsee woman.	2503
A gentleman. Trichinopoly.	2504
Ayah with a babe. Trichinopoly.	2505
A Brahman.	2506
A Kayath of Lucknow.	2507
A beggar or <i>fakir</i> .	2508
A Hindustani Merchant.	2509
A Panjabi Sikh, professing the religion of Guru Nanak.	2510
A Turk woman.	2511
A Turk man.	2512
A Turk woman.	2513
A native soldier of the British Army.	2514
A Mahomedan.	2515
A Munshi or clerk.	2516

A water-carrier.	2517
Woman with a child.	2518
A dancing girl of the N.-W. P.	2519
A constable or sepoy.	2520
A peon with the peon-book.	2521
Sweeper with broom.	2522
Sweeper with broom.	2523
Washerman.	2524
Groom with saddle on the shoulder.	2525
Khidmatgar, bearer.	2526
Khidmatgar holding a cap.	2527
A peon.	2528
A coachman.	2529
An Afghan woman.	2530
An Afghan man.	2531

	207
A washerman.	2532
A Brahman.	2533
A Hindustani lady.	2534
A Bengalee with Hookah.	2535
An Ayah or a maid servant.	2536
A Jester or buffoon who earns his livelihood by playfully disguising his person.	2537
An Ayah.	2538
An old man.	2539
A horseman of the British Cavalry.	2540
A porter or <i>kahar</i> .	2541
A Government servant.	2542
A wood-cutter.	2543
A Fisherman.	2544
An Ayah.	2545
A Bearer or Khidmatgar.	2546

A gentleman of India.	2547
A Khidmatgar.	2548
A Coachman.	2549
A Khidmatgar.	2550
Model of a Palanquin or <i>peenas</i> with a gentleman inside and two carriers or bearers at each end.	2551
A sweeper.	2552
A boy with whisks.	2553
A lady of India.	2554
A water-carrier.	2555
A water-carrier or a <i>fakir</i> . Trichinopoly.	2556
A Pandit.	2557
A horseman lying fallen down from the back of his horse.	2558
Washerman carrying his son on the neck. Trichinopoly.	2559
A porter carrying a woman in a basket tied on his back.	2560
Porter or Bhoyee, <i>kahar</i> .	2561

	209
A washerman.	2562
A woman of Biyani.	2563
A Pandit.	2564
A barber's wife dressing the hair of a native lady.	2565
A Mahomedan sitting by his camel laden with tents, poles, pegs, &c.	2566
Water-carrier, <i>Bihishti</i> .	2567
Water-carrier or <i>Bihishti</i> with his water bags of leather, <i>Pakkal</i> , on a buffalo. Maker—G. V. Dongre. Bought at the Bombay Art Society's Industrial Art Exhibition in 1890.	2568
Water-carrier or <i>Bihishti</i> .	2569
Water-carrier or <i>Bihishti</i> .	2570
The Durbar of a Mahratta Prince with all his courtiers and a dancing girl in front. Poona.	2571
A Fisherman.	2572
A Water-carrier or <i>Bihishti</i> pouring water in a bucket or tub.	2573
Japanese doll.	2574

Clay bracket.

2575

A Pandit.

2576

Woman with her child on her lap. Wood. Painted.

2577

Bracket. Clay.

2578

## WALL FRAME No. CCLXIII.

Object Lesson Card, No. 17. Vegetable Kingdom. The Cork Tree. Specimens of the leaf, the bark, and the prepared bark, with an account of the tree, the places where it is found, and the various uses to which it is put in art manufactures. Oliver and Boyd, Edinburgh.

2579

## WALL FRAME No. CCLXIV.

Object Lesson Card, No. 18. Vegetable Kingdom. Silk-worm's cocoon and mulberry tree; specimens of mulberry leaf, silk-worm's cocoon, silk, satin, and velvet, with a short history of seri-culture, and the names of the chief centres where silk is manufactured. Oliver and Boyd, Edinburgh.

2580

## WALL FRAME No. CCLXV.

Object Lesson Card, No. 19. Vegetable Kingdom. The Rose Tree. Specimens of the leaves of the Rose tree (*Rosa Canina*) and Bramble, Strawberry, Raspberry, and Potentilla (plants belonging to the Rose Family) with the uses of the Rose flower, the names of the other plants of the Rose Family and the structure of the flower. Oliver and Boyd, Edinburgh.

2581



## WALL FRAME No. CCLXVI.

Object Lesson Card, No. 20. Vegetable Kingdom. Sea-Weed (Algæ). Specimens of sea-weed, soap and bottle glass, and the description of the various articles obtained from the sea-weed, and their uses. Oliver and Boyd, Edinburgh.

2582

## WALL FRAME No. CCLXVII.

Object Lesson Card, No. 13. Vegetable Kingdom. Cotton (Gossypium). Specimens of cotton leaf, cotton pod and seed, cotton wool, thread, muslin, printed calico, book binder's cloth, and Fustian with a description of the plant and the process of manufacturing cloth. Oliver and Boyd, Edinburgh.

2583

## WALL FRAME No. CCLXVIII.

Object Lesson Card, No. 14. Vegetable Kingdom. The Flax plant (Linum Usitatissimum). Specimens of the plant, the fibre of the stalks, thread, linen, and paper, with a description of the plant, the process of preparing flax and the uses of the seeds of flax. Oliver and Boyd, Edinburgh.

2584

## WALL FRAME No. CCLXIX.

Object Lesson Card, No. 15. Vegetable Kingdom. The Hemp plant (Cannabis Sativa). Specimens of plant, fibres of the stalks, sailcloth and cord, with short notes on the process of manufacturing its fibre, its commercial importance and the other valuable plants of the Nettle Family to which hemp belongs. Oliver and Boyd, Edinburgh.

2585

## WALL FRAME No. CCLXX.

Object Lesson Card, No. 16. Vegetable Kingdom. Esparto (Lygeum Spartum). Specimens of the Esparto grass and paper made from it with a description of its manufacture and the etymology of the words, paper, book, &c. Oliver and Boyd, Edinburgh.

2586

## WALL FRAME No. CCLXXI.

Map of India, coloured, showing the British Provinces, Native States, capitals or seats of Government, and the important residences. Lithographed at the Survey of India Office, Calcutta, February, 1886.

2587

## WALL FRAME No. CCLXXII.

Map of India, coloured, showing its physical configuration. Photographed at the Survey of India Office, Calcutta, March, 1886.

2588

## WALL FRAME No. CCLXXIII.

Object Lesson Card, No. 9. Vegetable Kingdom. The Chestnut tree. Specimens of the leaf and seed with a description containing the names of the places where the chestnut grows, the probable origin of its name, and the uses of its nuts and wood. Oliver and Boyd, Edinburgh.

2589

## WALL FRAME No. CCLXXIV.

Object Lesson Card, No. 10. Vegetable Kingdom. The Birch tree (Betula Alba). Specimens of the leaf and bark with short notes on the various uses of the wood and an account of the Alder tree and the Lady or Weeping Birch, two other varieties of the Birch. Oliver and Boyd, Edinburgh.

2590

## WALL FRAME No. CCLXXV.

Object Lesson Card, No. 11. Vegetable Kingdom. The Walnut tree (Juglans). Specimens of leaf and nut with an account of the tree, the fruit, and the use of its products. Oliver and Boyd, Edinburgh.

2591

## WALL FRAME No. CCLXXVI.

Object Lesson Card, No. 12. Vegetable Kingdom. The Cypress tree and Cedar of Lebanon. Specimens of their leaves and Cedar pen-holder with a description of the trees and the uses of their valuable wood. Oliver and Boyd, Edinburgh.

2592

## WALL FRAME No. CCLXXVII.

Object Lesson Card, No. 41. Gums and Resins. Illustrations of the trees of Guttapercha and India Rubber and small specimens of Guttapercha and Coauchouk with short descriptions. Emile Deyrolle, Paris.

2593

## WALL FRAME No. CCLXXVIII.

Object Lesson Card, No. 42 Industrial woods—Birch, Alder, Walnut, and the Yoke Elm. Illustrations of their leaves and flowers, specimens of their wood and bark, and their uses. Emile Deyrolle, Paris.

2594

## WALL FRAME No. CCLXXIX.

Map of India, coloured, showing its geological features. Lithographed at the Survey of India Office, Calcutta, February, 1886.

2595

## WALL FRAME No. CCLXXX.

Map of India, coloured, showing the Railways (opened, in progress, and proposed) and places where coal and iron ores are found. Lithographed at the Survey of India Office, Calcutta, February, 1886.

2596

## WALL FRAME No. CCLXXXI.

Object Lesson Card, No. 43. Illustrations of the Industrial woods of the Natural order, Rosaceæ. The Rose Family, (the Apple, the Pear, the Hawthorn, and the Wild Cherry), and twelve specimens of their wood. Emile Deyrolle, Paris.

2597

## WALL FRAME No. CCLXXXII.

Object Lesson Card, No. 44. Illustrations of the Industrial woods—the Acacia, the Ash, the Elm, and the Plane trees, and twelve specimens of their woods. Emile Deyrolle, Paris.

2598

## WALL FRAME No. CCLXXXIII.

Object Lesson Card, No. 51. Illustrations of the Poisonous plants—the Celandine, the Aconite, the Buttercup, the Fools-parsely, *Euphorbia helioscopia*, the Anemone, and the Bryony, and the sections of their flowers to show their structure. Emile Deyrolle, Paris.

2599

## WALL FRAME No. CCLXXXIV.

Object Lesson Card, No. 130. Illustration of the Beet-root (Beta). Natural order—Chenopodiaceæ. The Goosefoot Family. It is a biennial pot-herb whose roots are edible. There are many other varieties of this valuable plant, one of which is used for feeding cattle. Another contains saccharine juice, and is employed in manufacturing sugar. Emile Deyrolle, Paris.

2600

## WALL FRAME No. CCLXXXV.

Map of India, coloured, showing the average rain-fall and temperature of India during the cold weather or the North-East Monsoon Period (November to February inclusive). Lithographed at the Survey of India Office, Calcutta, February, 1886.

2601

## WALL FRAME No. CCLXXXVI.

Map of India, coloured, showing the average rain-fall and temperature of India during the hot weather period (March to May inclusive). Lithographed at the Survey of India Office, Calcutta, February, 1886.

2602

## WALL FRAME No. CCLXXXVII.

Object Lesson Card, No. 52. Illustrations of the Edible Mushrooms of the different varieties with their names. Emile Deyrolle, Paris.

2603

## WALL FRAME No. CCLXXXVIII.

Object Lesson Card, No. 53. Illustrations of the Poisonous Mushrooms of the different varieties with their names. Emile Deyrolle, Paris.

2604

## WALL FRAME No. CCLXXXIX.

Object Lesson Card, No. 5. Vegetable Kingdom. The Willow tree (*Salix*). Specimens of osier twigs, willow plait for bonnets and material for bonnet frames with an interesting account of the common willow and the uses of its twigs, timber, and bark. Oliver and Boyd, Edinburgh.

2605

## WALL FRAME No. CCXC.

Object Lesson Card, No. 6. Vegetable Kingdom. The Oak tree (*Quercus Robur*). Specimens of the leaf, oak bark, piece of trunk, acorn, untanned leather and tanned leather, with a description setting forth the distinguishing characters of the oak, and its use in architecture, ship building and dyeing. Oliver and Boyd, Edinburgh.

2606

## WALL FRAME No. CCXCI.

Object Lesson Card, No. 7. Vegetable Kingdom. The Beech tree (*Fagus Salvatica*). Specimens of the leaf and beech-nut with an account of the common beech showing its uses in carpentry, ship-building, supplying food stuff and oil, and straw platting and the time when the tree should be felled. Oliver and Boyd, Edinburgh.

2607

## WALL FRAME No. CCXCII.

Object Lesson Card, No. 8. Vegetable Kingdom. The Ash tree (*Fraxinus Excelsior*). Specimens of the leaf and seeds with a description of its utility and various uses as well as a short account of the Rowan tree or mountain ash which is of a distinct genus from the ash. Oliver and Boyd, Edinburgh.

2608

## WALL FRAME No. CCXCIII.

Map of India, showing the average rain-fall and temperature during the rainy season or South-West Monsoon period, June to October inclusive. Lithographed at the Survey of India Office, Calcutta, February, 1886.

2609

## WALL FRAME No. CCXCIV.

Map of India, showing the places whence population was registered for emigration to the colonies during the years, 1881-82 and 1883-84. Lithographed at the Survey of India Office, Calcutta, February, 1886.

2610

## WALL FRAME No. CCXCV.

Object Lesson Card, No. 1. Vegetable Kingdom. Wheat (*Triticum Sativum*). Specimens of wheat, straw-plait, biscuit, paper made of wheat straw, and Macaroni, with a description of the tree, giving the uses of the straw and the seeds. Oliver and Boyd, Edinburgh.

2611

## WALL FRAME No. CCXCVI.

Object Lesson Card, No. 2. Vegetable Kingdom. The Tea plant (*Thea*) and the Coffee plant (*Coffea Arabica*). Specimens of their leaves and coffee seeds with a short note giving the places of their cultivation, the process of preparing them for consumption, and their medicinal properties. Oliver and Boyd, Edinburgh.

2612



## WALL FRAME No. CCXCVII.

Object Lesson Card, No. 3. Vegetable Kingdom. The Sycamore or Plane tree (*Acer-Pseudo-Platanus*). Specimens of the leaf and wood, with a description of the tree and of two other varieties of it (the Common Maple and the Sugar Maple), showing their uses in art manufactures and in producing sugar. Oliver and Boyd, Edinburgh.

2613

## WALL FRAME No CCXCVIII.

Object Lesson Card, No. 4. Vegetable Kingdom. The Fir (*Pinus Sylvestris*) and Larch (*Larix Europea*). Specimens of leaf and cones with an account of the trees and the valuable articles obtained from them for art manufactures. Oliver and Boyd, Edinburgh.

2614

## WALL FRAME No. CCXCIX.

Natural History Plate. The illustrations of the Wheat (*Triticum vulgare*), the Rice (*Oryza sativa*) and the Maize (*Zea mays*). They belong to the Natural Order—Graminaceæ (the Grass Family), and are characterised by the possession of knotty and hollow stems, leaves consisting of sheaths and disks, flowers arranged either in spikes or panicles, and the fruits enclosed in husks.

They are the most important productions of the Earth, and are used as food. No. 131. Emile Deyrolle, Paris.

2615

## WALL FRAME No. CCC.

Natural History Plate. The illustrations of the fruits—Apricots (*Prunus Armeniaca*), Peach (*Persica vulgaris*), Cherry (*Prunus avium*), Magnum Bonum Plums (*Prunus insititia*), Greengages (a variety of plum), Olives (*olea Europæa*), Orange (*Citrus Aurantium*), Gooseberries *Ribes Grossularia*, Strawberries (*Fragaria*), Fig (*Ficus Carica*), Pear (*Pyrus Communis*) and Nuts (*Scleria*). No. 132. Emile Deyrolle, Paris.

2616

## WALL FRAME No. CCCL.

Botanical Chart, illustrating the poisonous plants with their nomenclature. Part II. No. 154. Bouasse Lebel, Paris.  
2617

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## WALL FRAME No. CCCII.

Natural History Plate. Illustration of the Apple tree (*Pyrus malus*), Natural Order—Rosaceæ, the Rose Family. It grows wild in forests, and many varieties of it are cultivated in the Temperate zones. Its blossoms are white, having pink margins, leaves oval, and the bark generally smooth. English and American apple is superior to the Indian. No. 124. Emile Deyrolle, Paris.

2618

## WALL FRAME No. CCCIII.

Natural History Plate. Illustration of the Oak tree, (*Quercus*). Natural Order—Cupuliferæ. The Oak and Chestnut Family. A gigantic timber-tree of the forests which lives many centuries. Three hundred varieties of it are now found in Europe, Asia, and North America. Its wood is hard and tough. The Oakes have alternate leaves and staminate flowers in catkins. Its fruit, a smooth nut, is called an acorn, and is inclosed more or less in a scaly cup. No. 125. Emile Deyrolle, Paris.

2619

## WALL FRAME No. CCCIV.

Map of India, showing the divisions of the country which are chiefly noted for particular vegetable products. Plate 13, Constable's Hand Atlas of India.

2620

## WALL FRAME No. CCCV.

Botanical Chart, illustrating the Poisonous plants with their nomenclature. Part I. No. 154. Bouasse Lebel, Paris.

2621

## SHELVES Nos. CCCVI to CCCVIII.

Shelves (carved) filled with glass stoppered bottles containing specimens of the economic and raw produce of the country. (Descriptions are written on the bottles).

## WALL FRAME No. CCCIX.

Natural History Plate. Illustration of Potatoes (*Solanum esculentum*) in the ground. Natural Order—Solanaceæ. The Nightshade Family. It is a native of South America, and has solitary and pennate leaves. It is cultivated for its underground bulbs or tubers which form the food of many millions of people. Sugar of grapes, starch, sago, and brandy are prepared from them. No. 127. Emile Deyrolle, Paris.

2622

## WALL FRAME No. CCCX.

Natural History Plate. Illustration of the Vine (*Vitis vinifera*). Natural Order—Ampelideæ. The Vine Family. It is a climbing knotty shrub with tendrils having simple lobed and serrated leaves. Its small greenish flowers stand opposite to the leaves, and the fruit is either consumed raw and dried, or manufactured into wine. No. 126. Emile Deyrolle, Paris.

2623

## WALL FRAME No. CCCXI.

Chart, showing the trade of India with the World, total imports and exports for 19 years (1867-85), trade in wheat, tea and oilseeds for 19 years (1867-85), and monthly average Home consumption of China, Indian and Ceylon teas in each of the 22 years together with the percentage of Indian and Ceylon teas consumed in each year. Phot zincographed at the Survey of India Office, Calcutta, March, 1886.

2624

## WALL FRAME No. CCCXII.

Diagram, showing rise and fall in the price of wheat in Cawnpore during the years 1860-84. Lithographed at the Survey of India Office, Calcutta, March, 1886.

2625

## WALL FRAME No. CCCXIII.

Natural History Plate. Illustration of the Carrot, (*Daucus Carota*). Natural Order—Umbelliferæ). The Umbellate Family. It is a herbaceous plant which has an erect and hollow stem, alternate sheathing and much divided leaves and flowers in terminal compound umbels. It is biennial and its spindle-shaped root of a reddish yellow colour is eaten. No. 128. Emile Deyrolle, Paris.

2626

## WALL FRAME No. CCCIV.

Natural History Plate. Illustrations of the Textile plants—Hemp (*Cannabis sativa*), Natural Order—Urticaceæ; Flax (*Linum Usitatissimum*), Natural order, Linaceæ; and Cotton (*Gossypium herbaceum*), Natural order, Malvaceæ. They are of pre-eminent importance to man, and are extensively cultivated. No. 129. Emile Deyrolle, Paris.

2627

## SHELVES Nos. CCCXV &amp; CCCXVI.

Shelves ( carved ) filled with glass stoppered bottles, containing specimens of the economic and raw produce of the country. ( Descriptions are written on the bottles ).

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## WALL FRAME No. CCCXVII.

Object Lesson Card, No. 49. The Industrial woods ( Holly, Box, Service tree or Sorb and the Dogberry ), illustrations of their leaves and the structure of their flowers, and specimens of the different sections of their wood with their uses. Emile Deyrolle, Paris.

2628

## WALL FRAME No. CCCXVIII.

Object Lesson Card, No. 50. The Poisonous plants ( Deadly Nightshade, Belladonna, Datura, Digitalis, Henbane, Colchicum, and Ergot of Rye ), illustrations of their leaves and fruits and the structure of their flowers. Emile Deyrolle, Paris.

2629

## WALL FRAME No. CCCXIX.

Object Lesson Card, No. 47. Vegetable Kingdom. Industrial Woods ( the Oak, Cork oak, Chestnut and Beech ) of the Family Cupuliferæ ; illustrations of their leaves and the structure of their flowers with specimens of the different sections of their wood and uses. Emile Deyrolle, Paris.

2630

## WALL FRAME No. CCCXX.

Object Lesson Card, No. 48. Vegetable Kingdom. Industrial Woods ( White Poplar and the Aspen ) of the Family Salinacæ, illustrations of their leaves and the structure of their flowers with specimens of the different sections of their wood and uses. Emile Deyrolle, Paris.

2631

## WALL FRAME No. CCCXXI.

Object Lesson Card, No. 45. Vegetable Kingdom. Industrial Woods ( the Chestnut, the Line, the Maple, and the Sycamore ). Illustrations of their leaves and the structure of their flowers with specimens of the different sections of their wood and uses. Emile Deyrolle, Paris.

2632

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## WALL FRAME No. CCCXXII.

Object Lesson Card, No. 46 Vegetable Kingdom. Industrial Woods ( Pine, Larch, the Maritime Pine, and the Fir ) of the Family Coniferæ. Illustrations of their leaves and fruits with specimens of the different sections of their wood and uses. Emile Deyrolle, Paris.

2633

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## SHELVES Nos. CCCXXIII to CCCXXV.

Shelves, carved, filled with glass stoppered bottles, containing specimens of the economic and raw produce of the country. Descriptions are written on the bottles.

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## WALL FRAME No. CCCXXVI.

Object Lesson Card, No. 39. Vegetable Kingdom. Cotton. Explained and illustrated by means of a coloured diagram of the plant and some twenty one real specimens of its products, comprising of a capsule of cotton containing seeds in a card box, cotton seed with down in a glass phial, twelve samples of raw cotton from different places in glass phials, three cotton threads, and four cotton tissues. Emile Deyrolle, Paris.

2634

## WALL FRAME No. CCCXXVII.

Object Lesson Card, No. 40. Vegetable Kingdom. Gums and Resins, showing what they are, illustrations of the plants from which they are obtained, and specimens of Gum Arabic, Gum Tragacanth, Gum Copal, and Benzoin, exhibited in phials. Emile Deyrolle, Paris.

2635

## WALL FRAME No. CCCXXVIII.

Object Lesson Card, No. 37 Vegetable Kingdom. Flax, explained and illustrated by means of a coloured diagram of the plant, its seeds ( Linseed ) in a glass phial from which oil is expressed, Linseed meal ( in a glass phial ) used for medicinal purposes, and some ten other real specimens of the stems, threads, and tissues, to show different manufactured stages up to the thread and fabric. Emile Deyrolle, Paris.

2636

## WALL FRAME No. CCCXXIX.

Object Lesson Card, No. 38. Vegetable Kingdom. Hemp. Illustrations of the plant and the structure of the flowers with specimens of the seeds, stems, and fibres of hemp, threads, cords and fabrics to illustrate the different stages of the manufacture of cloth and rope. Emile Deyrolle, Paris.

2637

## WALL FRAME No. CCCXXX.

Object Lesson Card, No. 35. Vegetable Kingdom. Dye plants, explained and illustrated by means of coloured diagrams of the Indigo, Logwood, Saffron, and Gamboge plants, the colouring stuffs and specimens of the dyes they produce. Emile Deyrolle, Paris.

2638



## WALL FRAME No. CCCXXXI.

Object Lesson Card, No. 36. Vegetable Kingdom. Dye plants. Explained and illustrated by means of coloured diagrams of the Safflower, Madder, Buckthorn, and Orchal, by colouring materials they yield in glass phials, and specimens of the dyes produced by them. Emile Deyrolle, Paris.

2639

## SHELVES Nos. CCCXXXII. &amp; CCCXXXIII.

Shelves, carved, filled with glass stoppered bottles containing specimens of the raw produce of the country.

## WALL FRAME No. CCCXXXIV.

Manures. Explained and illustrated by means of twelve real specimens of the natural Phosphates of Lime, out of which seven are in small glass phials; six real specimens of the primary substances out of which five only are in glass phials, and six real specimens of the compound manures all of which are in glass phials and fastened on Card No. 26 bis. by Emile Deyrolle, Paris.

2640

## WALL FRAME No. CCCXXXV.

Manures, its uses and results. Explained and illustrated by means of separate coloured diagrams of wheat and cereals, trefoil and lucerne, the vine and the potatoes, grown with and without manures, and six real specimens of the different manures in small glass phials fastened near the drawings of the proper plants on Card No. 26 Ter. by Emile Deyrolle, Paris.

2641

## WALL FRAME No. CCCXXXVI.

Elements of Cultivation, Organization of Vegetables. Explained and illustrated by means of coloured diagrams to show the structure of the fruit and grain and the process of germination of the different plants on Card No. 25 by Emile Deyrolle, Paris.

2642

## WALL FRAME No. CCCXXXVII.

Elements of Cultivation, Organization of Vegetables, Reproduction of Cryptogams. Explained and illustrated by means of the type example of the Ferns, Algæ, and Mushrooms on Card No. 26 by Emile Deyrolle, Paris.

2643

## WALL FRAME No. CCCXXXVIII.

Elements of Cultivation, Organization of Vegetables. Illustrated to show by coloured diagrams the structure of the buds and leaves, and the cells and the tissues of vegetables. Card No. 23 by Emile Deyrolle, Paris.

2644

## WALL FRAME No. CCCXXXIX.

Elements of Cultivation, Organization of Vegetables Explained and illustrated by means of coloured diagrams of the structure of the flower and of the reproductive organs. Card No. 24 by Emile Deyrolle, Paris.

2645

## SHELVES Nos. CCCXL. to CCCXLII.

Shelves, carved, filled with glass stoppered phials containing specimens of the economic and raw produce of the country. (Descriptions on the bottles).

## WALL FRAME No. CCCXLIII.

Elements of Cultivation, Organization of Vegetables. Explained and illustrated by means of coloured diagrams of the stems and roots of the different plants on Card No. 21 by Emile Deyrolle, Paris.

2646

## WALL FRAME No. CCCXLIV.

Elements of Cultivation, Organization of Vegetables. Explained and illustrated by means of coloured diagrams of the general structure of the stem, with two specimens of wood, and of the structure of the roots of trees on Card No. 22 by Emile Deyrolle, Paris.

2647

## SHELVES Nos. CCCXLV. &amp; CCCXLVI.

Shelves filled with glass stoppered bottles containing specimens of the raw produce of the country. (Descriptions on the bottles).

## SHELF No. CCCXLVII.

Shelf, carved, filled with glass stoppered bottles containing specimens of the economic and raw produce of the country. (Descriptions on the bottles).

## NICHE CASE No. CCCXLVIII.

Large bottles containing varieties of Rosa sugar and specimens of pottery from Lucknow, Amroha, and Basa.

## SHELVES Nos. CCCXLIX. to CCCLI.

Specimens of raw produce in glass stoppered bottles with descriptions on the labels.

WALL SPACE No. CCCLII.

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NICHE CASE No. CCCLIII.

Temporarily filled.

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WALL SPACE No. CCCLIV.

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NICHE CASE No. CCCLV.

Temporarily filled.

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WALL SPACES Nos. CCCLVI. TO CCCLVII.

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NICHE CASE No. CCCLVIII.

Temporarily filled.

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WALL SPACES Nos. CCCLIX. & CCCLX.

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## NICHE CASE No. CCCLXI.

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WALL SPACE No. CCCLXII.

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SHELVES Nos. CCCLXIII. to CCCLXV.

Specimens of the economic and raw produce of the country  
exhibited in glass stoppered phials with labels.

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NICHE CASE No. CCCLXVI.

Specimens of rude and grotesque figures in clay.

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SHELVES Nos. CCCLXVII. to CCCLXIX.

Specimens of the raw and economic produce exhibited in  
glass stoppered phials with labels.

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WALL FRAME No. CCCLXX.

Cox and Co.'s Practical Object Lessons, Series 2. "Sewing  
Cotton" showing the various stages of manufacture by  
specimens in the manufacture of cotton threads. London.  
2648

Cox and Co.'s Practical Object Lessons, Series 6, "Paper  
making" showing all the materials used in the manufac-  
ture of paper. London.  
2649

NICHE CASE No. CCCLXXI.

Specimens of pottery from Azamgarh and Lucknow.

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WALL SPACES Nos. CCCLXXII. & CCCLXXIII.

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NICHE CASE No. CCCLXXIV.

Specimens of pottery.

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WALL SPACES Nos. CCCLXXV. & CCCLXXVI.

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NICHE CASE No. CCCLXXVII.

Specimens of pottery.

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WALL SPACES Nos. CCCLXXVIII. &  
CCCLXXIX.

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NICHE CASE No. CCCLXXX.

Specimens of pottery from Amroha in Rohilkhand, N.-W. P.

## WALL FRAME No. CCCLXXXI.

Cox and Co.'s Practical Object Lessons, Series 10. "Rope Making," shewing the various stages of manufacture by specimens in the manufacture of Rope. London.

2650

Cox and Co.'s Practical Object Lessons, Series 14. "Flax and Linen," shewing the various stages of manufacture by specimens in the manufacture of Flax and Linen.

2651

2652

2653

2654

2655

## BRACKET CASE No. CCCLXXXII.

*Clay Models of Fruit from Lucknow.*

*Allium Sativum*, Garlic, *Lahsan*. Natural order—Liliaceæ, the Lily Family. It is cultivated throughout India, has a strong acrid and pungent taste, and is used to season dishes.

2656-9

*Allium Cepa*, Onion, *Piyaz*. Natural order—Liliaceæ, the Lily Family. It is found in all the parts of India, and the strong-flavoured bulbous roots are used as an article of food. There are other species of this genus.

2660-61



*Allium Cepa*, onion, *piyaz*. Natural order—Liliaceæ, the Lily Family. It is found in all the parts of India, and the strong-flavoured bulbous roots are used as an article of food. There are other species of this genus.

2662-3

*Allium Cepa*, onion, *piyaz*. Natural order—Liliaceæ, the Lily Family. It is found in all the parts of India, and the strong-flavoured bulbous roots are used as an article of food. There are other species of this genus.

2664

*Colocasia Antiquorum* Taro, Eddoes or Scratch-coco, *aruvi*. Natural order—Aroideæ. The Arum Family. Type-kuchoo or kachalu. It is widely cultivated in the tropics, and is an important farinaceous article of food.

2665-7

*Momordica Charantia*, *karela*. Natural order—Cucurbitaceæ. The Gourd Family. It is found on the plains of India, and is cooked for eating. As the fruit is bitter, it is necessary to boil it in hot water.

2668-73

*Curcuma Longa*, Turmeric, *haldi*. Natural order—Scitamineæ. The Ginger Family. It is grown all over the Eastern tropics, has a slight aromatic smell and somewhat bitter and acrid taste. It is used as a condiment, a medicine, and a colour.

2674-6

*Zingiber Officinale*, Ginger, *sonth* or *adrakh*. Natural order—Scitamineæ. The Ginger Family. It is found in the East and West Indies, and is used as a condiment and a medicine. It is also preserved in pickle.

2677-8

*Cucumis Sativus*, cucumber, *khira*. Natural order—Cucurbitaceæ. The Gourd Family. It is cultivated in Northern India, and the unripe fruit is eaten either fresh or preserved in pickle.

2679-80

*Cucumis Sativus*, cucumber, *khira*. Natural order—Cucurbitaceæ. The Gourd Family. It is cultivated in Northern India, and the unripe fruit is eaten either fresh or preserved in pickle.

2681-2

*Cucumis Sativus*, cucumber, *khira*. Natural order—Cucurbitaceæ. The Gourd Family. It is cultivated in Northern India, and the unripe fruit is eaten either fresh or preserved in pickle.

2683-4

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## BRACKET CASE No. CCCLXXXIII.

### *Clay Fruits from Lucknow.*

*Benincasa Cerifera*. White melon, *petha*. Natural order—Cucurbitaceæ. The Gourd Family. It is grown throughout India. It is eaten either as a cooked vegetable or as a sweetmeat, and sometimes an excellent preserve is prepared by cooking the fruit in syrup.

2685-6

*Lagenaria Vulgaris*, Bottle Gourd, *lauki*. Natural order—Cucurbitaceæ. The Gourd Family. It is extensively cultivated in India, America, Australia and China, and occurs in various forms. The fruit is cooked as a curry; and when its interior part is removed, bottles and bowls are made of it.

2687

*Trichosanthes dioica*, *parwal*, palwal. Natural order—Cucurbitaceæ. The Gourd Family. It is found in several districts of Northern India, and the cooked vegetable is highly valued.

2688-93

*Luffa Acutangula*, Gourd, *turayi ghiya*. Natural order—Cucurbitaceæ. The Gourd Family. It is found in many parts of India, and excellent vegetable dish is prepared of the fruit.

2694-6

*Cucumis Utilissimus, kakri.* Natural order—Cucurbitaceæ. The Gourd Family. It is grown in Upper Bengal, the North-Western Provinces, and the Panjab. The fruit forms an important article of food, and is eaten fresh or cooked. The seeds contain much farinaceous matter mixed with oil, and are highly nutritious.

2697-2700

*Cucumis Utilissimus, kakri.* Natural order—Cucurbitaceæ. The Gourd Family. It is grown in Upper Bengal, the North-Western Provinces, and the Panjab. The fruit forms an important article of food, and is eaten fresh or cooked. The seeds contain much farinaceous matter mixed with oil, and are highly nutritious.

2701

*Trichosanthes Anguina*, Snake gourd, *chhachhenda*. Natural order—Cucurbitaceæ. The Gourd Family. It is cultivated throughout the plains of India, and the fruit is a good vegetable.

2702-4

*Trichosanthes Anguina*, Snake gourd, *chhachhenda*. Natural order—Cucurbitaceæ. The Gourd Family. It is cultivated throughout the plains of India, and the fruit is a good vegetable.

2705

*Luffa Acutangula*, Gourd, *turayi khatdar*. Natural order—Cucurbitaceæ. The Gourd Family. It is found in many parts of India, and an excellent vegetable dish is prepared of the fruit.

2706-7

*Luffa Acutangula*, Gourd, *turayi khatdar*. Natural order—Cucurbitaceæ. The Gourd Family. It is found in many parts of India, and is a good vegetable.

2708

*Vicia Faba*, the Field Bean, *sem, balol*. Natural order—Leguminosæ. It is cultivated in most parts of India, and is dressed with the pod and the seeds. The seeds are sometimes fried with butter, other spices, and salt.

2709-14

*Hibiscus Esculentus*, Okra, *bhindi*. Natural order—Malvaceæ. The Mallow Family. It is a native of tropical America, and is largely cultivated in India. The unripe mucilaginous pods are very nutritious. The seed is also edible.

2715-7

*Hibiscus Esculentus*, Okra, *bhindi*. Natural order—Malvaceæ. The Mallow Family. It is a native of tropical America, and is largely cultivated in India. The unripe mucilaginous pods are very nutritious.

2718-9

*Daucus Carota*, Carrot, *gajar*. Natural order—Umbelliferae. The Umbellate Family. It is met with in most parts of India, and is employed in feeding beasts. It is a good vegetable, and the juice is used for coloring butter and cheese.

2720-1

*Daucus Carota*, Carrot, *gajar*. Natural order—Umbelliferae. The Umbellate Family. It is met with in most parts of India, and is employed in feeding beasts. It is a useful vegetable.

2722

*Zea Mays*, Maize or Indian Corn, *bhutta*, *makka*. Natural order—Gramineæ. The Grass Family. It is a native of America, and is now grown in the tropics. It is a most nutritious article of food.

2723-5

*Amarantus Paniculatus*, *chanle ki phali*. Natural order—Gramineæ. The Grass Family. It is a native of America and is now grown throughout the tropics. It is a most nutritious article of food.

2726-31

*Batatas Edulis*, Sweet Potato, *shakarkand*. Natural order—Convolvulaceæ. The Bindweed Family. It is cultivated in all tropical countries. It is roasted, fried, or boiled for eating, and is very delicious.

2732-3

*Penicillaria Spicata*, Spiked millet, *bajra*. Natural order—Graminæ. Its original home is tropical Asia, Nubia, and Egypt; and is extensively grown in Northern and Southern India. Its flour is used in making bread during winter, and is regarded as heating.

2734

*Pisum Sativum*, the Common Pea, *matar*. Natural order—Leguminosæ. It is cultivated in most parts of India, and is more nourishing than wheat.

2735-40

*Pisum Sativum*, the Common Pea, *matar*. Natural order—Leguminosæ. It is cultivated in most parts of India, and is more nourishing than wheat.

2741-2

*Pisum Sativum*, the Common Pea, *matar*. Natural order—Leguminosæ. It is cultivated in most parts of India, and is more nourishing than wheat.

2743-6

*Capsicum frutescens*. Chili. Spurpepper, Cayenne pepper, Red pepper, *mirach lal*. Natural order—Solanaceæ. The Nightshade Family. It is extensively grown in most parts of India, and has an exceedingly biting and pungent taste. The fruits, both green and ripe, are used in pickles and in cookery.

2747-52

*Capsicum frutescens*. Chili. Spurpepper, Cayenne pepper, Red pepper, *mirach lal*. Natural order—Solanaceæ. The Nightshade Family. It is extensively grown in most parts of India, and has an exceedingly biting and pungent taste. The fruits, both green and ripe, are used in pickles and in cookery.

2753-6

*Capsicum frutescens*. Chili. Spurpepper, Cayenne pepper, Red pepper, *lal mirach*. Natural order—Solanaceæ. The Nightshade Family. It is extensively grown in most parts of India and has an exceedingly biting and pungent taste. The fruits, both green and ripe, are used in pickles and in cookery.

2757

*Cucumis sativus*, Cucumber, *khira*. Natural order—Cucurbitaceæ. The Gourd Family. It is cultivated in Northern India, and the unripe fruit is eaten either fresh or preserved in pickle.

2758-9

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BRACKET CASE No. CCCLXXXIV.

*Clay Models of Fruits from Lucknow.*

*Solanum Melongena*, Brinjal, Aubergine or Egg plant, *baingan*. Natural order—Solanaceæ The Nightshade Family. It is generally cultivated throughout India. It makes a nice vegetable dish, and is allied to the tomato.

2760-1

*Solanum* sp. (country) Egg plant, *baingan safed*.

2762

*Solanum Melongena*, Egg plant, (country) *baingan*. Natural order—Solanaceæ. The Nightshade Family. It is generally cultivated throughout India. It makes a nice vegetable dish, and is allied to the tomato.

2763-4

*Solanum Melongena*, Egg plant, (country) *baingan*. Natural order—Solanaceæ. The Nightshade Family. It is generally cultivated throughout India. It makes a nice vegetable dish, and is allied to the tomato.

2665-6

*Solanum Melongena*, Egg plant, (country) *baingan*. Natural order—Solanaceæ. The Nightshade Family. It is generally cultivated throughout India. It makes a nice vegetable dish, and is allied to the tomato.

2767-8

*Brassica Rapa*, Turnip, *shalgam*. Natural order—Cruciferae. The Crucifer Family. It is very commonly grown in India, and its curry is regarded to be very delicious. It is also preserved in pickle.

2769-70

*Beta Vulgaris*, Beet, *chukandar*. Natural order—Chenopodiaceæ. The Goosefoot Family. It is more or less grown in all parts of India, and the valuable tap-roots are cooked for eating.

2771-2

*Brassica Oleracea Caulo-rapa*. Turnip-stemmed Cabbage, *ganth gobhi*. Natural order—Cruciferæ. The Crucifer Family. It is more or less found in all parts of India, and its flavour is like a cauliflower. A nice vegetable for table use.

2773

*Raphanus Sativus*, Radish, *mooli*. Natural order—Cruciferæ. The Crucifer Family. It is cultivated throughout India. It is eaten both fresh and cooked, and is sometimes preserved in pickle.

2774-5

*Raphanus Sativus*. Radish; *mooli*. Natural order—Cruciferæ. The Crucifer Family. It is cultivated throughout India. It is eaten both fresh and cooked, and is sometimes preserved in pickle.

2776

*Dioscorea Sativa*, Common Yam, *rataloo*. Natural order—Dioscoreaceæ. The Yam Family. It is grown in most places in India. The roots are farcinaceous and acrid. This acidity disappears by special cooking.

2777

*Dioscorea-bulbifera*, Bulb-bearing Yam, *zamikand*. Natural order—Dioscoreaceæ. The Yam Family. Cultivated in the North Western Provinces and in South India. The bulbs are extremely acrid, and to make them eatable they are boiled with tamarind leaves and *emblica officinale* (Anvla) before cooking.

2778

*Pueraria Tuberosa*, *bilai kand*. Natural order—Leguminosæ. Found in the Western Himalaya, the Western Ghats, and Orissa. The sweet tubers are large and are eaten.

2779-81



*Lagenaria Vulgaris*, Bottle gourd, *lauki*. Natural order—Cucurbitaceæ. The Gourd Family. It is extensively cultivated in India, America, Australia and China, and occurs in various forms. The fruit is cooked as a curry; and when its interior part is removed, bottles and bowls are made of it.

2782

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## BRACKET CASE No. CCCLXXXV.

### *Clay Fruits from Lucknow.*

*Solanum Tuberosum*, Potato, *alu*. Natural order—Solanaceæ. The Nightshade Family. It is a native of America, and was brought to India from Spain and is now cultivated. It is preserved in pickle, cooked for table use and making bread, and a kind of brandy is also manufactured from it.

2783-4

*Solanum Ovigerum*, Egg plant (foreign), *baingan bilaiti*. Natural order—Solanaceæ. The Nightshade Family. It is cultivated more or less in the plains, and has a delicate flavour. It is cooked for table use.

2785-9

*Cucumis Momordica*, *phoot*. Natural order—Cucurbitaceæ. The Gourd Family. It is found in all parts of India where melons grow, and in taste is like a cucumber. It is eaten both in unripe and ripe state.

2790-3

*Batatas Edulis*, Sweet potato, *shakarband safed*. Natural order—Convolvulaceæ. The Bindweed Family.

2794

*Averrhoa Carambola*, *kamrakh*. Natural order—Geraniaceæ. The Balsam Family. It is a native of India, and the acid fruits are used in preparing jelly and pickle. They are sometimes cooked with radish, and are very wholesome. The fresh ripe fruit is very refreshing.

2795-8

*Cucumis Melo*, Sweet melon, *kharbooza*. Natural order—*Cucurbitaceæ*. The Gourd Family. Many varieties of this fruit are grown in the sandy beds of the North-West Provinces, and during the season are largely eaten by all classes of people.

2799-2801

*Citrus Aurantium*, Orange, *narangi*. Natural order—*Rutaceæ*. The Orange Family. It is grown in many parts of India. Sikkim, Sylhet, the Punjab, and Nagpur produce the best.

2802-4

*Feronia Elephantum*, Elephant Apple or the Wood Apple, *kaith*. Natural order—*Rutaceæ*. The Rue Family. It is found more or less throughout India, Ceylon, and Burma.

2805

*Ananassa Sativa*, the Pine Apple, *anannas*. Natural order—*Coniferæ*. The Pine Family. It is a tropical American fruit, and the Portuguese introduced it into India. It is a remedy for scurvy, and the fruit boiled and preserved in syrup is very delicious and refreshing.

2806

*Carica Papaya*, Papan, *arand kharbuza*. (*Passifloreæ*). Natural order—*Cucurbitaceæ*. The Gourd Family. It is cultivated in most parts of India. The green fruit is cooked, and when ripe, it is eaten fresh and is regarded laxative. The unripe fruit is sometimes cooked with meat to make it delicious.

2807-9

*Citrus Acidia*, the sour Lime of India, *khatta niboo kagzi*. Natural order—*Rutaceæ*. The Rue Family. It is found in all parts of India, and its juice is used in preserving ginger and other fruits.

2810

*Citrus Medica*, the Citron, Lemon, *khatta niboo*. Natural order—*Rutaceæ*. The Rue Family. It is grown to a small or large extent in most parts of India, and its juice is employed in dyeing clothes.

2811-2

Citrus Limetta, Sweet lime, *meetha neemboo*. Natural order—Rutaceæ. The Rue Family. It is cultivated in gardens throughout India to a very small extent and its juice is very refreshing.

2813

Artocarpus Integrifolia, Jack fruit, *kathal*. Natural order—Urticaceæ. The Fig Family. It is cultivated to a limited extent in North West Provinces and in Southern India, and the fruits are cooked for table use, and sometimes preserved in oil with spices.

2814

Ægle Marmelos, Bael fruit, *bael*. Natural order—Rutaceæ. The Rue Family. It is found more or less in most parts of India, and is well known for its medicinal properties.

2815

Ægle Marmelos, Bael fruit, *bael*. Natural order—Rutaceæ. The Rue Family. It is found more or less in most parts of India, and is well known for its medicinal properties.

2816-7

Citrus Medica, the Citron, *lemon*. Natural order—Rutaceæ. The Rue Family.

2818

Artocarpus Lakoocha, Bread Fruit, *badhal*. Natural order—Urticaceæ. The Fig Family. It is found in Kuma, Sikkim, Eastern Bengal, and Burma, and the fruit is eaten.

2819

Citrullus Vulgaris, Var. Fistulosus, *dilpasand tinda*, *dhe-dhas*. Natural order—Cucurbitaceæ. The Gourd Family. Cultivated in N.-W. Provinces, Rajputana, and Sindh, and is cooked for table use.

2820

Citrus Decumana, the Shaddock or Pomelo or Forbidden Fruit, *chakotra*. Natural order—Rutaceæ. The Rue Family. It is cultivated in most tropical gardens in India. The fruit is not very commonly eaten.

2821

*Citrus Decumana*, the Shaddock or Pomelo or Forbidden Fruit, *chakotra*. Natural order—Rutaceæ. The Rue Family. It is cultivated in most tropical gardens in India. The fruit is not very commonly eaten.

2822

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## BRACKET CASE No. CCCLXXXVI.

### *Clay Fruits from Lucknow.*

*Musa Sapientum*, Banana (plantain), *kela*. Natural order—Scitamineæ. The Ginger and Arrowroot Family. It is widely grown throughout India, the ripe fruit is eaten fresh, while the unripe ones are cooked and sometimes preserved in oil after being boiled.

2823-4

*Musa Sapientum*, Banana (plantain), *kela*. Natural order—Scitamineæ. The Ginger and Arrowroot Family. It is widely grown throughout India, the ripe fruit is eaten fresh, while the unripe ones are cooked and sometimes preserved in oil after being boiled.

2825-6

*Musa Sapientum*, Banana (plantain), *kela*. Natural order—Scitamineæ. The Ginger and Arrowroot Family. It is widely grown throughout India, the ripe fruit is eaten fresh, while the unripe ones are cooked and sometimes preserved in oil after being boiled.

2827-8

*Citrus Aurantium*, large Orange (variety), *santra*. Natural order—Rutaceæ. The Rue Family. See Nos. 2802-4.

2829-30

*Citrus Aurantium*, Orange, *narangi*. Natural order—Rutaceæ. The Rue Family.

2831

*Citrus Aurantium*, Orange, *narangi*. Natural order—Rutaceæ. The Rue Family.

2832-3

*Punica Granatum*, Pomegranate, *anar*. Natural order—Myrtaceæ. The Myrtle Family. It is cultivated in India and Burma, and is found wild in the north-western regions of the Himalaya and Sulaiman Range. There are many qualities of the fruit peculiar to the soil and clime. The best are produced in Afghanistan. The seeds and the rind are highly valued for their medicinal properties.

2834-5

*Punica Granatum*, Pomegranate, *anar*. Natural order—Myrtaceæ. The Myrtle Family. It is cultivated in India and Burma, and is found wild in the north-western regions of the Himalaya and Sulaiman Range. There are many qualities of the fruit peculiar to the soil and clime. The best are produced in Afghanistan. The seeds and the rind are highly valued for their medicinal properties.

2836

*Punica Granatum*, Pomegranate, *anar*. Natural order—Myrtaceæ. The Myrtle Family. It is cultivated in India and Burma, and is found wild in the north-western regions of the Himalaya and Sulaiman Range. There are many qualities of the fruit peculiar to the soil and clime. The best are produced in Afghanistan. The seeds and the rind are highly valued for their medicinal properties.

2837

*Mangifera Indica*, the mango, *am*. Natural order—Anacardiaceæ. The Mango Family. It is cultivated more or less throughout India. The ripe fruit is eaten fresh, and the unripe is used in preparing pickles, preserves, and tarts. The seeds of the unripe fruit are also preserved in oil.

2838

*Mangifera Indica*, the mango, *am*. Natural order—Anacardiaceæ. The Mango Family. It is cultivated more or less throughout India. The ripe fruit is eaten fresh, and the unripe is used in preparing pickles, preserves, and tarts. The seeds of the unripe fruit are also preserved in oil.

2839

*Mangifera Indica*, the mango, *am*. Natural order—Anacardiaceæ. The Mango Family. It is cultivated more or less

throughout India. The ripe fruit is eaten fresh, and the unripe is used in preparing pickles, preserves, and tarts. The seeds of the unripe fruit are also preserved in oil.

2840

*Mangifera Indica*, the mango, *am*. Natural order—Anacardiaceæ. The Mango Family. It is cultivated more or less throughout India. The ripe fruit is eaten fresh, and the unripe is used in preparing pickles, preserves, and tarts. The seeds of the unripe fruit are also preserved in oil.

2841

*Mangifera Indica*, the mango, *am* ; *amba*. Natural order—Anacardiaceæ. The Mango Family. It is cultivated more or less throughout India. The ripe fruit is eaten fresh, and the unripe is used in preparing pickles, preserves, and tarts. The seeds of the unripe fruit are also preserved in oil.

2842

*Mangifera Indica*, the mango, *am*. Natural order—Anacardiaceæ. The Mango Family. It is cultivated more or less throughout India. The ripe fruit is eaten fresh, and the unripe is used in preparing pickles, preserves, and tarts. The seeds of the unripe fruit are also preserved in oil.

2843

*Mangifera Indica*, the mango, *am*. Natural order—Anacardiaceæ. The Mango Family. It is cultivated more or less throughout India. The ripe fruit is eaten fresh, and the unripe is used in preparing pickles, preserves, and tarts. The seeds of the unripe fruit are also preserved in oil.

2844

*Citrus Aurantium*, Orange, *narangi*. Natural order—Rutaceæ. The Rue Family.

2845-6

*Citrus Aurantium*, Orange, *narangi vilaiti*. Natural order—Rutaceæ. The Rue Family.

2847

*Citrus Aurantium*, orange, *narangi*. Natural order—Rutaceæ. The Rue Family.

2848



*Saccharum officinarum*, Sugar-cane, *paunda*, *ganna*, *santha*. Natural order—Gramineæ. The Grass Family. It is very widely cultivated, and is found all over tropical and sub-tropical Asia, and the islands of the Indian and Pacific Oceans. For many ages it has been the chief source of the sugar of commerce which is manufactured from its juice. There are many varieties of it formed by difference of the soil and clime. Rice is cooked in the fresh juice which is also employed in the preparation of a vinegar. The sugar-cane is generally *chewed* after meals by Indians when it is said to be of very great medicinal efficacy.

2849-53

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## BRACKET CASE No. CCCLXXXVII.

### *Small Clay Fruits from Lucknow.*

*Eriobotrya Japonica*, *loquat* or Japan medlar. Natural order—Rosaceæ. The Rose Family. It is a native of China and Japan, and is now grown in many parts of India. The fresh fruit is highly esteemed, and the unripe ones are sometimes preserved in vinegar.

2854

*Mimusops Elengi*, *bokul*, *moulsari*. Natural order—Sapotaceæ. The Sapodilla Family. It is commonly grown in most parts of India in gardens and the edible berries are full of oil.

2855-7

*Cardia Rothii*, *gundi*. Natural order—Boraginaceæ. The Borage Family. It is cultivated in dry parts of India, and the baccate berries are eaten.

2858

*Fragaria Vesca*, strawberry. Natural order—Rosaceæ. The Rose Family. It grows wild in the temperate portions of the Himalaya, and is cultivated in gardens.

2859-60

*Nephelium Litchii*, *litchi*, *lichii*. Natural order—Sapindaceæ. The Soapwort Family. It is a native of South China, and is now found in many gardens of India.

2861



*Zizyphus Jujuba*, jujube or Chinese dates, *ber* or *bor*. Natural order—Rhamnaceæ. The Buckthorn Family. It is found either wild or cultivated throughout India. The sweet fruit is eaten fresh, cooked for table use, and sometimes preserved in vinegar with spices.

2862-5

*Psidium guava*, the Guava, *amrud*. Natural order—Myrtaceæ. The Myrtle Family.

2866

*Ficus Carica* (two varieties), the Fig, *anjir*. Natural order—Urticaceæ. The Fig Family.

2867

*Carissa Carandas*, *karounda*. Natural order—Apocynaceæ. The Dogbane Family. It is found in all parts of India, and the tree serves for hedges. The berries are used in tarts, preserves, jellies, &c., and are also eaten raw.

2868

*Tamarindus Indica*, Tamar-i-Hind, *imli*. Natural order—Leguminosæ. It is found throughout India and the legumes, which are extremely sour, are used in pickles, preserves, tarts, &c., and are also employed in cookery instead of other acids.

2869

*Zizyphus Nummularia*, *ghariber*. Natural order—Rhamnaceæ. The Buckthorn Family. A fruit of the type Jujube, but much inferior to it in quality. It is eaten by the poor.

2870

*Phyllanthus distichus*, *harfa ravri*. Natural order—Euphorbiaceæ. The Spurge Family. A fruit cultivated in many gardens and is eaten both fresh and preserved.

2871

*Mimusops Indica*, *khirni*. Natural order—Sapotaceæ. The Sapodilla Family. Found in most parts of India. The sweet and yellow berries are edible.

2872-3

*Phyllanthus Emblica*, *anola*. Natural order—Euphorbiaceæ. The Spurge Family. It grows in the dry forests of India, and is preserved in syrup or is cooked for table use.

2874

*Ficus Carica*, Fig, *anjir*. Natural order—Urticaceæ. The Fig Family. It is grown all over the North-Western Provinces, the Panjab, and the Western Himalayas, and the fruit is eaten.

2875

*Morus Indica*, Mulberry, *shaktut*. Natural order—Urticaceæ. The Nettle and Fig Family. It is found throughout the North India and the Sub-Himalayan tracts. The fruit is eaten and is also used in preparing a syrup.

2876-7

*Juglans Regia*, the Walnut, *akhrot*. It grows wild in the North West Provinces, the Panjab, and the Sikkim Himalaya; and is widely cultivated throughout the hills. The kernel of the fruit is eaten, and its oil is used in cooking.

2878-80

*Phoenix Sylvestris*, the Wild Date Palm or Cade, *khajur*. Natural order—Palmaceæ. The Palm Family. It grows wild, and is also cultivated in most parts of India, and the fruit is eaten by the poorer classes.

2881

*Phoenix Dactylifera*, the Date Palm, *chuhara*. Natural order—Palmaceæ. The Palm Family. Cultivated in Southern Panjab and the neighbourhood of Sind. Recently introduced in Jeypore. The fruit is very wholesome and the kernels are ground for feeding animals. Date coffee is prepared by roasting the latter.

2882

*Cyperus tuberosus*. *Kaseru*. The fruit is grown in the North Western Provinces and the roots are sweet and fariaceous.

2883

*Amomum Subulatum*, the Greater Cardamom, the Grains of Paradise, *badī ilaichi*, *ilaichi doda*. Natural order—Scitamineæ. The Ginger and Arrow-root Family. It is a native of West Africa and the Eastern Archipelago. The seeds are aromatic. They are eaten and sometimes used in cookery to give flavour.

2884

*Pistacia Vera*, the Pistachio nut, *Pista*. Natural order—Anacardiaceæ. The Mango Family. It is found in Western Asia and Afghanistan whence it is imported in India. It has a delicious flavour and is used in a variety of ways for eating.

2885

*Amygdalus Communis*, the kernel of the almond, *badam ki giri*. Natural order Rosaceæ. The Rose Family. The part of the fruit used in eating.

2886

*Elettaria Cardamomum*, the Lesser Cardamom, *ilaichi*. Natural order—Scitamineæ. The Ginger and Arrow-root Family. It is widely cultivated in Southern India. The seeds are aromatic, and are used to give flavour to dishes and is often eaten raw.

2887

*Areca Catechu*, the Areca Nut, Betel Palm, *supari*. Natural order—Palmaceæ. The Palm Family. The specimen exhibited is a prepared form of the nut, and is either chewed with other spices and betel leaf or by itself, and is considered to help digestion.

Another specimen with the external covering or husk.

2888

*Trapa bispinosa*, water chestnut, *singhara*. Natural order—Onagraceæ. The Evening Primrose Family. An aquatic nut found throughout India, and forms an important article of food.

2889

*Amygdalus Communis*, the Almond, *badam*. Natural order—Rosaceæ. The Rose Family. An invaluable fruit grown in temperate climates and is largely imported from Persia, Afghanistan, Kashmir, and the Panjab.

2890-2

*Amygdalus Communis*, the Almond, *badam*. The fruit with the external husk not removed.

2893

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## BRACKET CASE No. CCCLXXXVIII.

### *Clay Fruits from Lucknow.*

*Eugenia Jambos*, Rose apple, *gulab jamun*. Natural order—Myrtaceæ. The Myrtle Family. It is cultivated in most parts of India, the fruit is eaten and is sometimes preserved.

2894

*Eugenia Jambos*, Rose apple, *gulab jamun*. Natural order—Myrtaceæ. The Myrtle Family. It is cultivated in most parts of India, the fruit is eaten and is sometimes preserved.

2895

*Myrica Sapida*, *kaiphal*. Natural order—Myrtaceæ. The Myrtle Family. A fruit found in the outer Himalaya and is highly valued for its medicinal properties.

2896

*Amygdalus Persica*, peach, *aru*. Natural order—Rosaceæ. The Rose Family. Cultivated throughout the Himalaya, and the fruit is eaten fresh or preserved in vinegar.

2897-8

*Amygdalus Persica*, peach, *aru*. Natural order—Rosaceæ. The Rose Family. Cultivated throughout the Himalaya, and the fruit is eaten fresh or preserved in vinegar.

2899-2900

*Amygdalus Persica*, peach, *aru*. Natural order—Rosaceæ. The Rose Family. Cultivated throughout the Himalaya, and the fruit is eaten fresh or preserved in vinegar.

2901

*Myrica Sapida*, *kaiphal*. Natural order—Myrtaceæ. The Myrtle Family. A fruit found in the outer Himalaya and is highly valued for its medicinal properties.

2902

*Eugenia Jambos*, Rose apple, *gulab jamun*. Natural order—Myrtaceæ. The Myrtle Family. It is cultivated in most parts of India, the fruit is eaten and is sometimes preserved.

2903

## BRACKET CASE No. CCCLXXXIX.

### *Models of Fruits in Clay from Lucknow.*

*Anona Squamosa*, Custard-apple or Sweet Sop, *sitaphal*. Natural order—Anonaceæ. The Custard-apple Family. It is a West Indian fruit, and is cultivated in most parts of India. It is very sweet, and has a delicate flavour.

2904

*Anona Squamosa*, Custard-apple or Sweet Sop, *sitaphal*. Natural order—Anonaceæ. The Custard-apple Family. It is a West Indian fruit, and is cultivated in most parts of India. It is very sweet, and has a delicate flavour.

2905

*Anona Squamosa*, Custard-apple or Sweet Sop, *sitaphal*. Natural order—Anonaceæ. The Custard-apple Family. It is a West Indian fruit, and is cultivated in most parts of India. It is very sweet, and has a delicate flavour.

2906

*Anona Squamosa*, Custard-apple or Sweet Sop, *sitaphal*. Natural order—Anonaceæ. The Custard-apple Family. It is a West Indian fruit, and is cultivated in most parts of India. It is very sweet, and has a delicate flavour.

2907

*Anona Squamosa*, Custard-apple or Sweet Sop, *sitaphal*.  
Natural order—Anonaceæ. The Custard-apple Family.  
It is a West Indian fruit, and is cultivated in most parts of  
India. It is very sweet, and has a delicate flavour.

2908

*Anona Squamosa*, Custard-apple or Sweet Sop, *sitaphal*.  
Natural order—Anonaceæ. The Custard-apple Family.  
It is a West Indian fruit, and is cultivated in most parts of  
India. It is very sweet, and has a delicate flavour.

2909

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## BRACKET CASE No. CCCXC.

### *Models of Clay Fruit from Lucknow.*

*Psidium Guyava*, guava, *amrud*. Natural order—Myrtaceæ. The Myrtle Family. The fruit is a native of America, but is naturalized in many parts of India. The fruit is eaten either fresh or preserved in vinegar. Europeans make a jelly or cheese of the fruit.

2910

*Psidium Guyava*, guava, *amrud*. Natural order—Myrtaceæ. The Myrtle Family. The fruit is a native of America, but is naturalized in many parts of India. The fruit is eaten either fresh or preserved in vinegar. Europeans make a jelly or cheese of the fruit.

2911-2

*Pyrus Cydonia*, the quince, *bibi*. Natural order—Rosaceæ. The Rose Family. An invaluable sweet fruit cultivated in temperate climates and is very refreshing.

2913

*Psidium Guyava*, guava, *amrud*. Natural order—Myrtaceæ. The Myrtle Family. The fruit is a native of America, but is naturalized in many parts of India. The fruit is eaten either fresh or preserved in vinegar. Europeans make a jelly or cheese of the fruit.

2914



*Pyrus Communis*, pear, *nashpati*. Natural order—Rosaceæ. The Rose Family. It grows wild in Kashmir, but is cultivated in Himalaya. It is eaten both fresh and preserved in syrup.

2915-7

*Pyrus Malus*, apple, *seo*. Natural order—Rosaceæ. The Rose Family. Grows wild in several parts of Northern India and the fruit is very useful.

2918-9

*Pyrus Malus*, apple, *seo*. Natural order—Rosaceæ. The Rose Family. Grows wild in several parts of Northern India and the fruit is very useful.

2920-1

*Vitis Vinifera*, grape, *angur*. Natural order—Ampelideæ. The Vine Family. It is extensively grown in Western Asia, and to the numerous varieties of the species we owe our wine, vinegar, currant, raisin and desert grapes.

2922

*Vitis Vinifera*, grape, *angur*. Natural order—Ampelideæ. The Vine Family. It is extensively grown in Western Asia, and to the numerous varieties of the species we owe our wine, vinegar, currant, raisin and desert grapes.

2923

*Vitis Vinifera*, grape, *angur*. Natural order—Ampelideæ. The Vine Family. It is extensively grown in Western Asia, and to the numerous varieties of the species we owe our wine, vinegar, currant, raisin and desert grapes.

2924

*Vitis Vinifera*, grape, *angur*. Natural order—Ampelideæ. The Vine Family. It is extensively grown in Western Asia, and to the numerous varieties of the species we owe our wine, vinegar, currant, raisin and desert grapes.

2925



*Models of Fruit in Clay from Trichinopoly.*

*Musa Sapientum*, Banana (plantain), bunch of plantains, *kelon-ki-gahar*. Natural order—Scitamineæ. The Arrow-root Family. It is extensively grown throughout India, the ripe fruit is eaten fresh, while the unripe ones are cooked and sometimes preserved in oil after being boiled.

2926

*Ananassa Sativa*, the pine apple, *ananas*. Natural order—Coniferæ. The Pine Family. It is a tropical American fruit, and the Portugese introduced it into India. It is a remedy for scurvy, and the fruit is boiled and preserved in syrup.

2927

*Musa Sapientum*, Banana (plantain), *kelon-ki-gahar*. Natural order—Scitamineæ. The Ginger and Arrow-root Family. It is extensively grown throughout India, the ripe fruit is eaten fresh, while the unripe ones are cooked and sometimes preserved in oil after being boiled.

2928

*Vitis Vinifera*, grapes, *angur*. Natural order—Ampelideæ. The Vine Family. It is extensively grown in Western Asia, and to the numerous varieties of the species we owe our wine, vinegar, currant, raisin and desert grapes.

2929

*Musa Sapientum*, Banana (plantain), flower of plantain tree, *kele-ka-phool*. Natural order—Scitamineæ. The Ginger and Arrow-root Family. The tree is grown throughout India, and the flower is cooked as vegetable.

2930

*Musa Sapientum*, Banana (plantain), flower of plantain, *kele-ka-phool*. Natural order—Scitamineæ. The Arrow-root Family. The tree is grown throughout India, and the flower is cooked as vegetable.

2931

*Solanum Ovigerum*, egg plant (foreign), tomato, *bilaiti baingan*. Natural order—Solanaceæ. The Nightshade Family. It is cultivated more or less in the plains and has a delicate flavour. It is cooked for table use.

2932

*Anona Squamosa*, Custard-apple, *sitaphal*. Natural order—Ananaceæ. The Custard-apple Family. It is a West Indian fruit, and is cultivated in most parts of India.

2933

*Anona Squamosa*, Custard-apple, *sitaphal*. Natural order—Ananaceæ. The Custard-apple Family. It is a West Indian fruit, and is cultivated in most parts of India.

2934

*Citrus Aurantium*, orange, *narangi*. Natural order—Rutaceæ. The Orange Family. It is grown in many parts of India. Sikkim, Sylhet, the Panjab, and Nagpur produce the best. The fruit is very refreshing and is sometimes preserved in syrup.

2935

*Anacardium Occidentale*, Cashew nut, *hijli badam*, *kajuphal*. Natural order—Anacardiaceæ. The Mango Family. An American fruit found in the forests on the sea coast of India.

2936

*Mangifera Indica*, the mango, *am*, bunch of mangoes. Natural order—Anacardiaceæ. The Mango Family. Found more or less throughout India. The fruit is eaten raw, and preserved in pickles, syrup, and oil.

2937

*Punica Granatum*, pomegranate, *daramon-ka-jhumka*. Natural order—Myrtaceæ. The Myrtle Family. It is cultivated in India and Burma, and grows wild in the North-West parts of the Himalaya and Sulaiman Range. The seeds and the rind have medicinal properties.

2938

*Anacardium Occidentale*, Cashew nut, *hijli badam*, *kajuphal*.  
Natural order—Anacardiaceæ. The Mango Family. An  
American fruit found in the forests on the sea coast of  
India.

2939

*Punica Granatum*, pomegranate, *daram*, *anar*. Natural  
order—Myrtaceæ. The Myrtle Family. It is cultivated  
in India and Burma, and grows wild in the North-West  
parts of the Himalaya and Sulaiman Range. The seeds  
and the rind have medicinal properties.

2940

*Anona Squamosa*, Custard-apple, *sitaphal*, *sharifa*. Natural  
order—Anonaceæ. The Custard-apple Family. It is a  
West Indian fruit, and is cultivated in most parts of India.  
It is very sweet, and has a delicate flavour.

2941

*Averrhoa Carambola*, *kamrakh*, *kamrakh-ka-jhumka*. Na-  
tural order—Geraniaceæ. The Balsam Family. Native  
of India, the acrid fruit is used in the preparation of jelly  
and pickle.

2942

*Pyrus Communis*, pears, *naspati-ka-jhumka*. Natural or-  
der—Rosaceæ. The Rose Family. It is found in several  
districts of Northern India, and grows wild in Kashmir.  
The pulp of the latter is granular and has a delicate fla-  
vour. From the fermented juice of the fruit Perry is  
made.

2943

*Anona Squamosa*, Custard apple, *sitaphal*. Natural order—  
Anonaceæ. The Custard-apple Family. It is a West  
Indian fruit, and is cultivated in most parts of India. It  
is very sweet, and has a delicate flavour.

2944

*Anacardium Occidentale*, Cashew nut, *hijli badam*, *kajuphal*.  
Natural order—Anacardiaceæ. The Mango Family. An  
American fruit found in the forests in the sea coast of  
India.

2945

*Mangifera Indica*, the mango, *am-ka-jhumka*. Bunch of Mangoes. Natural order—Anacardiaceæ. The Mango Family. Found more or less throughout India. The fruit is eaten preserved in pickles, syrup, and oil.

2946

*Citrus medica*, the citron, lemon, lime, *karna nebu*, *bijora*. Natural order—Rutaceæ. The Orange Family. It is grown more or less throughout India.

2947

*Cucumis melo*, melon, *kharbooza*. Natural order—Cucurbitaceæ. The Gourd Family. Many varieties of this fruit are grown in the sandy beds of the North-West Provinces and are largely eaten by all classes of people.

2948

*Zea Mays*, Maize, *makka-ka-sira*. Natural order—Gramineæ. The Grass Family. It is a native of America, and is now grown in the tropics. It is a most nutritious article of food.

2949

*Zea Mays*, Maize, *makka-ka-sira*. Natural order—Gramineæ. The Grass Family. It is a native of America, and is now grown in the tropics. It is a most nutritious article of food.

2950

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## BRACKET CASE No. CCCXCI.

*Containing Models in Clay and Wood of Fruits  
and Vegetables.*

Wooden Models from No. 2951 to 2963.

*Solanum Melongena*, (country), Egg plant, *baingan*. Natural order—Solanaceæ. The Nightshade Family. It is generally cultivated throughout India. It is allied to the tomato.

2951

*Solanum Melongena*, (country), Egg plant, *baingan*. Natural order—*Solanaceæ*. The Nightshade Family. It is generally cultivated throughout India. It is allied to the tomato.

2952

*Solanum Melongena*, (country), Egg plant, *baingan*. Natural order—*Solanaceæ*. The Nightshade Family. It is generally cultivated throughout India. It is allied to the tomato.

2953

*Eugenia Jambolana*, Rose apple, *jamun*. Natural order—*Myrtaceæ*. The Myrtle Family. It is cultivated in most parts of India, the fruit is eaten and is sometimes preserved.

2954

*Eugenia Jambolana*, Rose apple, *jamun*. Natural order—*Myrtaceæ*. The Myrtle Family. It is cultivated in most parts of India, the fruit is eaten and is sometimes preserved.

2955

*Luffa Acutangula*, Vegetable Marrow, *turai*. Natural order—*Cucurbitaceæ*. The Gourd Family. It is extensively cultivated in India, America, Australia and China, and occurs in various forms. The fruit is cooked as a curry; and when its interior part is removed, bottles and bowls are made of it.

2956

*Luffa Acutangula*, *turai*. Natural order—*Cucurbitaceæ*. The Gourd Family. It is found in many parts of India, and an excellent vegetable dish is prepared of the fruit.

2957

*Luffa Acutangula*, *turai*. Natural order—*Cucurbitaceæ*. The Gourd Family. It is found in many parts of India, and an excellent vegetable dish is prepared of the fruit.

2958

*Luffa Acutangula*, *turai*. Natural order—*Cucurbitaceæ*. The Gourd Family. It is found in many parts of India, and an excellent vegetable dish is prepared of the fruit.

2959

*Luffa Acutangula, turai.* Natural order—Cucurbitaceæ. The Gourd Family. It is found in many parts of India, and an excellent vegetable dish is prepared of the fruit.

2960

*Luffa Acutangula, turai.* Natural order—Cucurbitaceæ. The Gourd Family. It is found in many parts of India, and an excellent vegetable dish is prepared of the fruit.

2961

*Luffa Acutangula, turai.* Natural order—Cucurbitaceæ. The Gourd Family. It is found in many parts of India, and an excellent vegetable dish is prepared of the fruit.

2962

*Canavalia Eusiformis*, the Sword Bean, *sem*, *balol*. Natural order—Leguminosæ. The beans are cultivated in the eastern part of India, and are cooked for eating.

2963

*Models in Clay from No. 2964 to No. 2972.*

*Mangifera indica*, the Mango, *amb*, *am*, *amra*. Natural order—Anacardiaceæ. The Mango Family. The fruit is cultivated every where in India, and in some districts is found in abundance. It is eaten both fresh and preserved.

2964

*Musa Sapientum*, Banana (plantains), *kela*. Natural order—Scitamineæ. The Ginger and Arrow-root Family. It is widely grown throughout India, the ripe fruit is eaten fresh, while the unripe ones are cooked and sometimes preserved in oil after being boiled.

2965

*Citrus Medica, amalbed.* The Citron. Natural order—Rutaceæ. The Orange Family. Found in many parts of India.

2966

*Diospyros kaki*, Date plum. *Vilayati garb* or *gab*. Natural order—Ebenaceæ. The Ebony Family. The fruit is grown all over India.

2967



*Anacardium Occidentale*, Cashew nut, *hijli badam*, *kajuphal*.  
Natural order—Anacardiaceæ. The Mango Family. An  
American fruit now found in the forests near the sea in  
India.

2968

*Mangifera indica*, The Mango, *amb*, *am*, *amra*. Natural or-  
der—Anacardiaceæ. The Mango Family. The fruit is  
cultivated every where in India, and in some districts is  
found in abundance. It is eaten both fresh and pre-  
served.

2969

*Mangifera indica*, The Mango, *amb*, *am*, *amra*. Natural or-  
der—Anacardiaceæ. The Mango Family. The fruit is  
cultivated every where in India, and in some districts is  
found in abundance. It is eaten both fresh and pre-  
served.

2970

*Myrica Sapida*, *kaiphal*. Natural order—Myrtaceæ. The  
Myrtle Family. A fruit found in the outer Himalaya,  
and is highly valued for its medicinal properties.

2971

*Myrica Sapida*, *kaiphal*. Natural order—Myrtaceæ. The  
Myrtle Family. A fruit found in the outer Himalaya,  
and is highly valued for its medicinal properties.

2972

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## BRACKET CASE No. CCCXCII.

### *Clay Fruits from Lucknow.*

*Cucumis Melo.*, melon, *kharbooza*. Natural order—Cucur-  
bitaceæ. The Gourd Family. Many varieties of this  
fruit are grown in the sandy beds of the North-West Pro-  
vinces and are largely eaten by all classes of people.

2973



*Trapa Bicornis*, The Water Chestnut, *singhara*, *paniphal*, *sringata*. Natural order—Onagraceæ. The Evening Primrose Family. An aquatic fruit of the order Haloragaceæ, largely grown in all the Indian tanks. The kernel of the sweet and farinaceous fruit is used both fresh and dried. It is one of the vegetables eaten on the days of fasts by the Hindus.

2974

*Zizyphus Jujuba*, Jujube, or Chinese Dates, *ber*. Natural order—Rhamnaceæ. The Buckthorn Family. The fruit is grown all over India, and is eaten both fresh and preserved.

2975-6

*Punica Granatum*, pomegranate, *daram*, *anar*. Natural order—Myrtaceæ The Myrtle Family. It is cultivated in India and Burma, and grows wild in the North-West parts of the Himalaya and Sulaiman Range. The seeds and the rind have medicinal properties.

2977

*Citrus Aurantium*, orange, *narangi*. Natural order—Rutaceæ. The Orange Family. It is grown in many parts of India. Sikkim, Sylhet, the Panjab, and Nagpur produce the best.

2978

*Citrus Aurantium*, orange, *narangi*. Natural order—Rutaceæ. The Orange Family. It is grown in many parts of India. Sikkim, Sylhet, the Panjab, and Nagpur produce the best.

2979

*Citrus Aurantium*, orange, *narangi*. Natural order—Rutaceæ The Orange Family. It is grown in many parts of India. Sikkim, Sylhet, the Panjab, and Nagpur produce the best.

2980

*Citrus Aurantium*, orange, *narangi*. Natural order—Rutaceæ. The Orange Family. It is grown in many parts of India. Sikkim, Sylhet, the Panjab, and Nagpur produce the best.

2981

Citrus Aurantium, Orange, *narangi*. Natural order—Rutaceæ. The Orange Family. It is grown in many parts of India. Sikkin, Sylhet, the Panjab, and Nagpur produce the best.

2982

Solanum Melongena, Brinjal, Egg plant, (country), *baingan*. Natural order—Solanaceæ. The Nightshade Family. It is generally cultivated throughout India. It makes a nice vegetable dish and is allied to the tomato.

2983

Solanum sp., Egg plant, (white), *safed baingan*. Natural order—Solanaceæ. The Nightshade Family. It is generally cultivated throughout India. It makes a nice vegetable dish and is allied to the tomato.

2984

Saccharum officinarum, sugar-cane, *pounda, ganna, santha*. Natural order—Gramineæ. The Grass Family. It is very widely cultivated, and is found all over tropical and sub-tropical Asia, and the islands of the Indian and Pacific Oceans. For many ages it has been the chief source of the sugar of commerce which is manufactured from its juice. There are many varieties of it formed by difference of the soil and clime. Rice is cooked in the fresh juice which is also employed in the preparation of a vinegar. The sugar-cane is generally *chewed* after meals by Indians when it is said to be of very great medicinal efficacy.

2985

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2986

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2987

*Cucumis Melo*, melon, *kharbooza*. Natural order—Cucurbitaceæ. The Gourd Family. Many varieties of this fruit are grown in the sandy beds of the North-West Provinces and are largely eaten by all classes of people.

2988

*Luffa Egyptiaca*, White pumpkin, *ghiya*. Natural order—Cucurbitaceæ. The Gourd Family. It is found throughout the plains of India and is generally consumed in a variety of ways boiled both with salt or sugar.

2989

*Tricosanthes Anguina*, Snake gourd, *chachinda*. Natural order—Cucurbitaceæ. The Gourd Family. Cultivated on the plains in India and is used as a vegetable.

2990-1

*Tricosanthes Anguina*, Snake gourd, *chachinda*. Natural order—Cucurbitaceæ. The Gourd Family. Cultivated on the plains in India and is used as a vegetable.

2992

*Musa Sapientum*, Banana (plantain), *kela-ki-gahar*. Natural order—Scitamineæ The Arrow-root Family. It is widely grown throughout India, the ripe fruits are eaten fresh, while the unripe ones are cooked and sometimes preserved in oil after being boiled.

2993

*Tamarindus Indica*, tamarind, *imli*. Natural order—Leguminosæ. Found all over India and Burma, and is commonly employed as an acid in cooking vegetables, gives a cooling draught when diluted in water with sugar, and is generally believed to have medicinal properties.

2994-5

*Moringa pterygosperma*, Moringa or the Indian Horse Radish, *sajna*, *sanjna*. Natural order—Moringeæ. The beans are common throughout India, and are eaten in curries.

2996-8

*Citrus Decumana*, the Shaddock, Pumelo or Forbidden Fruit, *chakotra*. Natural order—Rutaceæ. The Rue Family. It is cultivated in most tropical gardens in India.

2999

*Mangifera indica*, the Mango, *amb*, *am*, *amra*. Natural order—Anacardiaceæ. The Mango Family. The fruit is cultivated every where in India, and in some districts is found in abundance. It is eaten both fresh and preserved.

3000-1

*Luffa Egyptiaca*, White pumpkin, *ghiya*. Natural order—Cucurbitaceæ. The Gourd Family. It is found throughout the plains of India and is generally consumed in a variety of ways boiled both with salt or sugar.

3002

*Luffa Acutangula*, Vegetable Marrow, *turayi*. Natural order—Cucurbitaceæ. The Gourd Family. It is extensively cultivated in India, America, Australia and China, and occurs in various forms. The fruit is cooked as a curry; and when its interior part is removed, bottles and bowls are made of it.

3003

*Borassus flabelliformis*, The Palmyra Palm, *tar*. Natural order—Palmaceæ. The Palm Family. The fruit is grown in South India and Bengal. It is eaten either raw or cooked with sugar and flour.

3004

*Cocos nucifera*, the Cocoanut palm, *nariyal*, (cut open).  
Natural order—Palmaceæ. The Palm Family.

3005

*Cocos nucifera*, the Cocoanut, *nariyal*. Natural order—  
Palmaceæ. The Palm Family. Cultivated on the sea  
coast in India and is a valuable fruit.

3006

*Hibiscus Esculentus*, Okra, *bhindi*. Natural order—Mal-  
vaceæ. The Mallow Family. It is a native of tropical  
America, and is largely cultivated in India. The unripe  
mucilaginous pods are very nutritious. The seed is also  
edible.

3007

*Hibiscus Esculentus*, Okra, *bhindi*. Natural order—Mal-  
vaceæ. The Mallow Family. It is a native of tropical  
America, and is largely cultivated in India. The unripe  
mucilaginous pods are very nutritious. The seed is also  
edible.

3008

*Hibiscus Esculentus*, Okra, *bhindi*. Natural order—Mal-  
vaceæ. The Mallow Family. It is a native of tropical  
America, and is largely cultivated in India. The unripe  
mucilaginous pods are very nutritious. The seed is also  
edible.

3009

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## BRACKET CASE No. CCCXCIII.

### *Clay Fruits from Trichinopoly.*

*Momordica Charantia*, *karela*. Natural order—Cucurbitaceæ.  
The Gourd Family. It is found on the plains of India,  
and is cooked for eating. As the fruit is bitter, it is neces-  
sary to boil it in hot water.

3010

*Momordica Charantia*, *karela*. Natural order—Cucurbitaceæ.  
The Gourd Family. It is found on the plains of India,  
and is cooked for eating. As the fruit is bitter, it is neces-  
sary to boil it in hot water.

3011

*Momordica Charantia, karela.* Natural order—Cucurbitaceæ.  
The Gourd Family. It is found on the plains of India,  
and is cooked for eating. As the fruit is bitter, it is neces-  
sary to boil it in hot water.

3012

*Solanum Sp.,* Egg plant, (country), bunch of Brinjals,  
*baingan-ka-jhoomka.* Natural order—Solanaceæ. The  
Nightshade Family. It is generally cultivated through-  
out India. It makes a nice vegetable dish, and is allied to  
the tomato.

3013-5

Gwar-ki-phali.

3016

Gwar-ki-phali.

3017

*Vicia Faba,* the Field Bean, *sem, balol.* Natural order—  
Leguminosæ. It is cultivated in most parts of India and  
is dressed with the pod and the seeds. The seeds are  
sometimes fried with butter, other spices and salt.

3018

*Capsicum frutescens.* Chilli. Spurpepper, Cayenne pepper,  
Red pepper, *mirach lal.* Natural order—Solanaceæ. The  
Nightshade Family. It is extensively grown in many  
parts of India, and has an exceedingly biting and pungent  
taste. The fruit, both green and ripe, is used in pickles  
and in cookery.

3019

*Capsicum frutescens.* Chilli. Spurpepper, Cayenne pepper,  
Red pepper, *mirach lal.* Natural order—Solanaceæ. The  
Nightshade Family. It is extensively grown in many  
parts of India, and has an exceedingly biting and pungent  
taste. The fruit, both green and ripe, is used in pickles  
and in cookery.

3020

*Capsicum frutescens.* Chilli. Spurpepper, Cayenne pepper,  
Red pepper, *mirach lal.* Natural order—Solanaceæ. The  
Nightshade Family. It is extensively grown in most



parts of India, and has an exceedingly biting and pungent taste. The fruit, both green and ripe, is used in pickles and in cookery.

3021

*Capsicum frutescens*. Chilli. Spurpepper, Cayenne pepper, Red pepper, *mirach* *lal*. Natural order—Solanaceæ. The Nightshade Family. It is extensively grown in many parts of India, and has an exceedingly biting and pungent taste. The fruit, both green and ripe, is used in pickles and in cookery.

3022

*Capsicum frutescens*. Chilli. Spurpepper, Cayenne pepper, Red pepper, *mirach* *lal*. Natural order—Solanaceæ. The Nightshade Family. It is extensively grown in most parts of India, and has an exceedingly biting and pungent taste. The fruit, both green and ripe, is used in pickles and in cookery.

3023

*Capsicum frutescens*. Chilli. Spurpepper, Cayenne pepper, Red pepper, *mirach* *lal*. Natural order—Solanaceæ. The Nightshade Family. It is extensively grown in most parts of India, and has an exceedingly biting and pungent taste. The fruit, both green and ripe, is used in pickles and in cookery.

3024

*Batatas Edulis*, Sweet Potato, *shakarkand*. Natural order—Convolvulaceæ. The Bindweed Family. It is cultivated in all tropical countries. It is roasted, fried, or boiled for eating.

3025

*Canavalia Eusiformis*, the Sword Bean, *sem*, *balol*. Natural order—Leguminosæ. The beans are cultivated in the Eastern part of India and are cooked for eating.

3026

*Capsicum frutescens*. Chilli. Spurpepper, Cayenne pepper, Red pepper, *mirach* *lal*. Natural order—Solanaceæ. The Nightshade Family. It is extensively grown in most parts of India and has an exceedingly biting and pungent taste. The fruit, both green and ripe, is used in pickles and in cookery.

3027



*Capsicum frutescens*. Chilli. Spurpepper, Cayenne pepper, Red pepper, *mirach lal*. Natural order—Solanaceæ. The Nightshade Family. It is extensively grown in most parts of India, and has an exceedingly biting and pungent taste. The fruit, both green and ripe, is used in pickles and in cookery.

3028

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BRACKET CASE No. CCCXCIV.

*Grasses, &c.*

*Aristida Murina*, Suliyawala, *ranpla*.

3029

*Chloris Barbata*, *sundarri*

3030

*Elysiene Scindica*, *khara makro*.

3031

*Panicum Sanguinale*, *chhikarri*

3032

*Andropogon Schoenanthus*, *chhant baru*.

3033

*Panicum Flavium*, *kuri*.

3034

*Panicum Helopus*, *bari kuri*.

3035

*Cenchrus Montanus*, *sada-bharbhoont*.

3036

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BRACKET CASE No. CCCXCV.

*Grasses.*

*Aristida Depressa*, *salahalo ranpla*.

3037

Cenchrus Catharticus, <i>bharbhoont</i> .	3038
Eragrostis Ciliaris, <i>oonar pooncha</i> .	3039
Andropogon Bladhii, <i>bansi</i> or <i>sundarri</i> .	3040
Setaria Glauca, <i>anan</i> .	3041
Eragrostis Cynosuroides, <i>dab</i> .	3042
Pennisetum Cenchroides, <i>andho bharbhoont</i> .	3043
Heteropogon Contortus, <i>soorwalo</i> .	3044
Panicum Ciliare, <i>kawai</i> .	3045
Anthistiria Polystachya, <sup>6</sup> <i>garwai garwai</i> .	3046

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BRACKET CASE No. CCCXCVI.

*Grasses.*

Andropogon Isochaenium, <i>sundarri</i> .	3047
Aphida Aristata, <i>karar gandhel</i> .	3048
Panicum Aubdotab, <i>barru</i> .	3049
Saccharum Munja, <i>sarkanda, sarr</i> .	3050

Andropogon Muricatus, *panni*.

3051

Eleusine Ægyptiaca, *makra*.

3052

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BRACKET CASE No. CCCXCVII.

(Not filled).

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BRACKET CASE No. CCCXCVIII.

Prussian Blue.

3053

Indigo Blue.

3054

Indigo Blue.

3055

Indigo Blue.

3056

Indigo Blue.

3057

Lump Lead.

3058

Lump Lead.

3059

Prussian Blue.

3060

Prussian Blue.

3061

Ball Blue.

3062

Indigo Blue.

3063

Indigo Blue.

3064

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BRACKET CASE No. CCCXCIX.

*Collection of Alkaloids or Active Principles  
of Vegetables, Plants, &c.*

1. Aconitine ex Aconite. Napello.
2. Anemonine.
3. Apomorphine mur. Cryst.
4. Arbutine Crist.
5. Aspidospermine Crist. Frande.
6. Atropine.
7. Bebeerine.
8. Benzoylecgonin.
9. Berberine.
10. Bryonin.
11. Brucine.
12. Caffeine.
13. Cannabin fonnio Merck.
14. Cantharidin.
15. Chelidonin.
16. Cocaine.
17. Codeine.
18. Colchicine.
19. Colocynthin.
20. Colocynthidin.
21. Coniine hydrobrom.
22. Concallamarin.
23. Cotoin ver.

24. Cotoin Para.
25. Cryptopin.
26. Curarin Sulfur.
27. Cyclamin.
28. Daturin.
29. Delphinin.
30. Digitalin. Cryst.
31. Ditain.
32. Duboisin Sulf.
33. Elaterin Cryst.
34. Emetin.
35. Euonymin.
36. Gelocminin.
37. Gentisin.
38. Helleborein.
39. Hydrocotoin.
40. Homatropin.
41. Hyoscyamin.
42. Hydrastin.
43. Hyoscin iod.
44. Kosiin.
45. Leptandrin.
46. Meconin.
47. Morphin.
48. Napellin.
49. Narcein.
50. Narcotin.
51. Oxyacanthin.
52. Papaverin.
53. Papayotin.
54. Pelletierin Sulfur.
55. Pencedanin.
56. Physostigmin Salicylic.
57. Pilocarpidin nitric.
58. Pilocarpin hydrochlor.
59. Piperin.
60. Podophyllotoxin.

61. Anassin Cryst.
62. Sabadillin.
63. Sabbatin.
64. Sapanin.
65. Scillitoxin.
66. Scoparin.
67. Senegin.
68. Solanin.
69. Spartein Sulf.
70. Strychnin.
71. Thebain.
72. Veratrin.

3065

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*Collection of Metals.*

Aluminium, Argentum fus., Argent. pulv., Arsenic, Aurum fus., Aurum pulv., Barium, Beryll, Bismuth., Borium, Cadmium, Calcium, Caesium chlorat., Cerium, Chromium fus., Chrom. pulv., Cobalt, Cuprum fus., Cuprum red, Didym, Erbium, Ferr. hyd. red, Hydrargyr, Indium, Iridium fus., Kalium Potassium, Lanthan, Lithium, Magnesium, Magnes. pulv., Mangan fus., Mangan pulv., Molybdaen, Natrium Sodium, Niccol, Niobium, Osmium, Pallad fus., Pallad pulv., Platin. fus., Platin pulv., Plumb, Rhodium fus., Rhodium pulv., Rubidium, Ruthenium, Selenium, Silicium, Silicium-Magnes, Stannum, Stibium, Strontium, Tantal, Tellur, Thallium, Thorium, Titan, Uranium, Vanadium, Wolfram, Yttrium, Zinc, Zircon.

3066

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COLLECTION OF ARTICLES found about 20 feet beneath the surface at Old Sambhar, of great antiquity, some of the specimens are Buddhist.

3067-98

## BRACKET CASE No. CCCC.

Specimens of Buddhist remains found from excavations near Sambhar. Supposed age not later than 600 A. D.

A small model in clay of a Buddhist stupa, covered with a layer of sky blue enamel, perforated near the top.

A smaller model in clay of a Buddhist stupa, covered with a layer of sky blue enamel, perforated near the top.

Beads miscellaneous—Carnelian, shell, round ivory, black obsidian, blue and green glass, &c., &c.

Spikes of bone more or less perfect, from 2 to  $3\frac{1}{2}$  inches in length, sharply pointed at both ends. These may have been used as tree nails or arrow points, or were associated with masses of iron, a metal more suitable for the purpose.

Fragments of ivory, bone, and agate bracelets, and beads, glass, &c.

3099

Buddhist remains near Sambhar, in Western Rajputana, India. Paper explanatory read before the Royal Asiatic Society, November 17, 1884, London. By Surgeon-Major T. H. Hendley, M.R.A.S.

3100

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METAL FRAMES ATTACHED TO PILLAR  
No. CCCCL.

*Illustrations of Plants in the India Museum, London.*

## Frame A.

*Cyperus tegetum*, Mat grass, *mudarktai*. Natural order—Cyperaceæ. The Sedge Family. It grows in moist situations, and is largely employed in mat weaving. The pith-like tissue of the stems of an allied species yielded the famous Papyrus of the Egyptians.



*Ananassa Sativa*, Pine apple; *ananas*. Natural order—Pandanaceæ. The Screw-Pine Family. It is supposed to be a native of the moist forests of South America, and is cultivated in hot and moist climates. The fruit is juicy and well-flavoured, and the fibre is used in making bags and the finest muslin-like fabric.

### Frame B.

*Pandanus odoratissimus*, *Pandanus* palm; the Fragrant Screw-Pine, *keora*, *ketgee*. Natural order—Pandanaceæ. The Screw-Pine Family. It grows wild in southern parts of India, though it abounds in Bengal, Madras and Burma. Its flowers have a strong delightful fragrance, and the leaves are used for covering huts, matting, cordage and bags.

### Frame C.

*Agave Americana*, Gayal or Agave; American Aloe, Vegetable silk, *bans-keora*. Natural order—Amaryllidaceæ. The Amaryllis Family. It is a native of America, and now grows wild in many parts of India. It is supposed by some to be the aloe mentioned in Scripture, and its leaves yield fibres employed chiefly in the manufacture of string and rope.

*Fourcroya gigantea*, large Agave; Great Aloe. Natural order—Amaryllidaceæ. The Amaryllis Family. It is an American tree, and has been introduced into Madras. It yields an excellent fibre.

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## PILLAR No. CCCCLII.

### Frame A.

*Dolichos Sinensis*, *lobia*, *chowli*. Natural order—Leguminosæ. It is an Indian plant, and is universally cultivated in the tropical zone. The seeds are heatening and less digestible than *urd* or *mung*, and the green pods are cooked for table use.

*Dolichos Uniflorus*, Horse gram, *kooltee*. Natural order—Leguminosæ. It is extensively grown on the Coast of India, and the seeds are largely used in feeding cattle. Poor people eat them, but their long and constant use is injurious.

### Frame B.

*Dolichos Uniflorus*, Horse gram, *kooltee*. Natural order—Leguminosæ. It is extensively grown on the Coast of India, and the seeds are largely used in feeding cattle. Poor people eat them, but their long and constant use is injurious.

*Phaseolus Roxburghii*, Green gram ; *urd*, *mash*. Natural order—Leguminosæ. It is grown throughout the plains. The seeds are cooked and are regarded highly nutritious. Sometimes bread is also made of the flour.

### Frame C.

*Canjanus Indicus*, Pigeon pea, *arhar*. Natural order—Leguminosæ. It is widely cultivated throughout India in light but moist soil, and is wholesome and nutritious.

*Canjanus Indicus*, Pigeon pea, *arhar*. Natural order—Leguminosæ. It is widely cultivated throughout India in light but moist soil, and is wholesome and nutritious.

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## CCCCIII.

### Frame A.

*Cicer Arietinum*, the Common Gram, Chicken Pea, *chana*. Natural order—Leguminosæ. It is grown in all parts of India for the valuable seeds which form the chief food of horses. In some districts, mixed with barley or alone, they are eaten by all classes of people when ground into flour, and the parched grains are commonly eaten by the labourers. Native physicians prescribe the young leaves fried in oil for leprosy.

*Lathyrus Sativus*, Chickling vetch ; Jarosæ, *gesse kasari*. Natural order—Leguminosæ. Cultivated, and in some places wild, throughout the Northern India. The pulse is often employed in feeding cattle, and is hard and indigestible. Its use has been found to give rise to paralysis.

### Frame B.

*Ervum Lens*, Lentil, *masur*. Natural order—Leguminosæ. It is largely grown in the Punjab, North-West Provinces and Oudh, Bengal, and the Central Provinces. It is highly nutritious though a little heating, and has been cultivated from very ancient times. Esau's pottage was made of it.

*Soja hispida*, Soy bean; *bhat*, *bhawan*. Natural order—Leguminosæ. Grown in several parts of India. The legumes or beans are employed in giving flavour to animal and vegetable dishes, and are regarded to help digestion.

### Frame C.

*Lablab vulgaris*, Nankin bean; the Lablab-bean, *sem*, *bunsim*. Natural order—Leguminosæ. A native plant found all over India, both wild and in a state of cultivation. The pods and the seeds are used as a vegetable.

*Phaseolus aconitifolius*, *moth*. Natural order—Leguminosæ. Found in the tropical parts of India and the grain is nutritious and heating. It is chiefly employed in fattening cattle and is supposed to cure flatulency.

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## CCCCIV.

### Frame A.

*Eleusine Coracana*, millet, *natchnee*, *ragee*, *marua*, *koda*. Natural order—Gramineæ. The Grass Family. A native grass extensively grown in light soils of Northern and Southern provinces of India. Poor people eat the grain and the stalks are given to cattle.

*Eleusine Stricta*, Raggee. Natural order—Gramineæ. The Grass Family. Closely allied to *Eleusine Coracana*, it does not yield a wholesome grain but is eaten in times of scarcity. A fermented liquor is prepared from it in Darjiling.

### Frame B.

*Chenopodium quinoa*. Quinoa. Natural order—Chenopodiaceæ. The Goosefoot Family. It is a native of Peru, and is grown in light argillaceous soil. As regards nutrition it closely resembles oats.

*Amarantus frumentaceus*, *kiery*. Natural order—Amaranthaceæ. The Amaranth Family. Grown in South India for the seeds which are made into flour and used as food.

### Frame C.

*Fagopyrum Esculentum*, the Buckwheat or Brank, *kala, tumba, chin, kathru*. Natural order—Polygonaceæ. The Buckwheat Family. Grown in Upper India for its farinaceous seeds of which a good bread is made by the poorer classes. They are also employed in feeding pheasants. As regards nutrition it is superior to rice, but is far below wheat.

*Arachis hypogæa*, the Ground Nut or Earth Nut, *mungphali*. Natural order—Leguminosæ. A native of South America, is now grown in Upper India, Bengal, and South India. The nuts full of oil are eaten by all classes of people. The oil is extracted by pressure, and the cakes are then given to cattle.

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### No. CCCC.V.

### Frame A.

*Panicum Miliare*, Little Millet. *Shamy, kutki*. Natural order—Gramineæ. The Grass Family. A native of India, grown to a certain extent in several parts of India in an elevated, light, and rich soil, and the seed is eaten by people. The straw is liked by the cattle.

*Oplismenus frumentaceus*, millet; *shamoola, samoa, sama, mandira*. Natural order—Gramineæ. The Grass Family. It is widely grown in India, and the millet is either cooked as rice or with milk and sugar. The stalks are given to cattle, and the straw is used as bedding.

### Frame B.

*Zea mays*. Maize, Indian corn, *mukka*, *bhutta*, *juar*. Natural order—Gramineæ. The Grass Family. Originally a native of South America, and is now cultivated in all tropical and sub-tropical countries. As a cereal it is next to wheat in nutritiveness, and is generally eaten by a very large portion of the people. The green and fresh stalks are given to cattle, while the hard ones are used for thatching.

*Oryza Sativa*, Paddy or Rice, *dhan*, *chawal*. Natural order—Gramineæ. The Grass Family. Cultivated more or less throughout India, and is the chief food stuff in many districts. The straw is used for cattle fodder, thatching, and to some extent for paper making.

### Frame C.

*Oryza Sativa*, Bearded Paddy. Natural order—Gramineæ. The Grass Family. Cultivated more or less throughout India, and is the chief food stuff in many districts. The straw is used for cattle fodder, thatching, and to some extent for paper making.

*Sorghum vulgare*, Indian or Great Millet, Guinea Corn, *juar*, *kurbi*, *cholum*. Natural order—Gramineæ. The Grass Family. Cultivated in many parts of India, and is an important article of food. The stalks and leaves are given to cattle.

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## No. CCCCVI.

### Frame A.

*Paspalum Scrobiculatum*, Millet. *koda*, *koda-ka-choul*. Natural order—Gramineæ. The Grass Family. Grown throughout tropical and sub-tropical Asia for the cheap grain which is commonly eaten by the poorer classes living in the hilly and barren tracts, but it causes diarrhoea.

*Panicum miliaceum*, Indian millet, *veragoo*, *warree*, *chena*. Natural order—Gramineæ. The Grass Family. Originally an Egyptian or Arabian Grass, but since a very long time largely cultivated in India for the grain which is useful during times of scarcity.

### Frame B.

*Setaria Italica*, German or Italian millet, *kagni*. Natural order—Gramineæ The Grass Family. Extensively cultivated both in the plains and on the hills in India, and is a valuable grain for making cakes, porridge, and pastry; and is also given to birds.

*Pencillaria Spicata*, Spiked millet, the Bulrush, *cumboo*, *bajra*, *lahra*. Widely grown in North and South India, and during the winter people eat it in a variety of ways as it is nutritious and heatening.

### Frame C.

*Pencillaria Spicata*, Spiked millet, the Bulrush, *cumboo*, *bajra*, *lahra*. Widely grown in North and South India, and during the winter people eat it in a variety of ways as it is nutritious and heatening. (Another variety).

*Coix lachrymus*, Job's Tears, *sankru*, *gurgur*, *kauch*. Natural order—Gramineæ. The Grass Family. It is found in several places in Northern India, and is largely consumed by the hill tribes who use the grains or tears as earrings.

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Coloured plates from M'Alpines' Biological Atlas, illustrating the life history of plants exhibited in metal frames attached to Pillar No. CCCCVII.

### Frame A.

The Yeast-plant (Yeast or *Torula*) and Bacteria; their formation and physiology.



Common brown mould (Mucor) produced from a conidium and a Zygosporangium and Common green mould (Pencilium); their growth and modes of reproduction.

### Frame B.

1. Protococcus ; its formation, reproduction, and physiology, and
2. Chara ; structure and the formation of Cortex.
1. Chara ; the reproductive organs on the leaf and their anatomy, and
2. The Bracken Fern ; leaves, stem, and roots, and the development of spores.

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## No. CCCCVIII.

### Frame A.

Fern ; the reproductive organs of the Royal Fern (Osmonda Regalis) and sections of Rhizome and part of an oblique section of a leaf-stalk.

The Flowering plants (Horse Chestnut, Pea and onion) ; parts of stem and its distinguishing characters in different plants.

### Frame B.

The Flowering plant ; structure of flower and seeds, and the formation of pollen grains.

The Flowering plants ; their histology or the structure of minute tissues.

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## No. CCCCI.

### Frame A.

Bœhmeriapuya, Grass Cloth Plant, Rhea grass, China grass, Puya. Natural order—Urticaceæ. The Nettle and Fig Family. An erect shrub in Bengal which yields the most valuable and finest fibre in India.



*Urtica heterophylla* or *Girardina heterophylla*, the Nilgri Nettle, *awa*, *bichua* Natural order—*Urticaceæ*. The Nettle and Fig Family. It grows in the forests of India, and has long stinging bristles.

### Frame B.

*Curcuma leucorrhiza*, Chittagong Arrow-root Plant. Natural order—*Scitamineæ*. The Arrow-root Family.

*Curcuma rubescens*. Natural order—*Scitamineæ*. The Arrow-root Family. Travancore Arrow-root Plant.

### Frame C.

*Pæderia foetida*, Bedolee, *sutta*, *gundali*, *gunda bhaduli*. Natural order—*Rubiaceæ*. The Peruvian-Bark Family. Found in the Himalayas and about Calcutta, yields a strong silk-like fibre, and the root is used as an emetic.

*Jatropha manihot*, *Mandioca* Plant. Natural order—*Euphorbiaceæ*. The Spurge Family. Native of South America, it is extensively grown in hot countries and yields a most valuable food called Cassava-meal or *Mandioca*.

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## No. CCCCX.

### Frame A.

*Hibiscus Sabdariffa*, the Roselle Fibre, *lal ambari*, *patwa*. Natural order—*Malvaceæ*. The Mallow Family. The bush has a succulent and acrid calyx, and is grown in many parts of India. The fibre is used in the manufacture of ropes, mats, and paper.

*Gossypium arboreum*. Tree cotton. Natural order—*Malvaceæ*. The Mallow Family. Cotton producing plant, widely cultivated in India for the useful material it yields, employed in the manufacture of cloth, lamp oil, and oil-cakes.

### Frame B.

*Crotalaria Juncea*, Indian Hemp, *sunu*, Brown Hemp, *sun*. Natural order—Leguminosæ. Extensively grown all over India for the valuable fibre which is admirably adapted for the production of ropes, canvas, and paper.

*Marsdenia tenasissima* Jetee; Bowstring Hemp. *Haba*. Natural order—Asclepiadaceæ. The Asclepias Family. This climber yields the Rajmahal Fibre which is silky and tenacious, and grows in Kamaun, Oudh, Bengal, and Behar.

### Frame C.

*Sida rhomboidea*, safed (white) Bariala. Natural order—Malvaceæ. The Mallow Family. It is a native of Bengal, and from its bark a very delicate and fine fibre equal to silk in length is manufactured.

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## CCCCXI.

### Frame A.

*Calotropis gigantea*. *madar* or *ycum*, *akanda*, *rui*. Natural order—Asclepiadaceæ. The Asclepias Family. It is found all over the plains in India. The pillows are stuffed with the silky hairs of the seeds, and the most valuable fibre called the Bowstring Hemp is obtained from its stems.

*Cannabis Sativa*. Hemp. Natural order—Urticaceæ. *Ganja*, *ganja*, *bhanga*, *charas*. As a fibre yielding plant it is entirely neglected in India, but is well known as a narcotic.

### Frame B.

*Gossypium herbaceum*. Native Indian Cotton Plant. *Rui*, *kapas karpasi*. Natural order—Malvaceæ. The Mallow Family. All the other native varieties of plants producing cotton belong to this species which is very widely cultivated in India.

*Gossypium herbaceum*, Native Indian Cotton Plant. *Rui*, *Kapas*, *Karpasi*. Natural order—Malvaceæ. The Mallow Family. All the other native varieties of plants producing cotton belong to this species which is very widely cultivated in India. (Another variety).

### Frame C.

*Gossypium Peruvianum*. Chain-seeded Cotton. The Peruvian Cotton.

*Gossypium barbadense*. American cotton. Bourbon Cotton or the Kidney Cotton. It yields the most valuable form of cotton.

## CCCCXII.

### Frame A.

*Corchorus olitorius*. Jute. Natural order—Tiliaceæ. The Jute Family. Largely cultivated in Bengal. Its fibre is employed in the manufacture of jute, paper, bags, and sacks and cordage. The leaves and shoots are used as a pot herb, and an infusion of the dried leaves is a tonic.

*Corchorus Capsularis*. Jute. Natural order—Tiliaceæ. The Jute Family. It is very commonly grown in the Central and Eastern parts of Bengal, and the valuable Jute of commerce is its product. The fibre obtained is 12 ft. in length.

### Frame B.

*Abutilon Indicum*, Indian mallow or Country mallow; *hungai*, *kanghi*, *petari*, *jhampi*. Natural order—Malvaceæ. The Mallow Family. It is abundantly found all over the tropical India. Many designs of Indian jewellery are borrowed from the curious form of its fruit, and its stems yield a fibre for making cordage.

*Urena lobata*, Rangoon mallow. *Bun-ochra*. Natural order—Malvaceæ. The Mallow Family. Found in the hotter regions of India, and the strong fibre obtained from that is well suited for making bags and twine.

### Frame C.

*Hibiscus Cannabinus*, Ambare or Hemp-like *Hibiscus*.  
Hemp-leaved *Hibiscus*, Deccani *hemp*, *ambari sankokla*,  
*patsar*, *sunī*. Natural order—Malvaceæ The Mallow  
Family. It is extensively grown in the North-West Pro-  
vinces and the Punjab for its fibre, which is used in the  
manufacture of paper, cordage, ropes, and nets.

*Sesbania aculeata*, Dhunchee ; Dhanicha. Natural order—  
Leguminosæ. Found in Bengal and South India, and its  
stalks yield a very strong and durable fibre superior to jute  
and is used in making fishing nets and cordage.

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### CCCCXIII.

### Frame A.

*Cocos Nucifera*, Palm, Cocoanut palm. The Coir or cocoa-nut  
Fibre. *Nariel* and *Narikel*. Natural order—Palmaceæ.  
The Palm Family. Found wild in tropical coasts. Its  
leaves are used for roofing houses, making mats and screens.  
The sap of the tree and the milk of the nuts are whole-  
some. The kernel is eaten, and its oil is very useful.  
Hukkas and other vessels are manufactured from the  
shell, and its fibrous covering is the Coir fibre which is  
employed in making many useful articles.

*Cocos nucifera*. Section of the fruit of cocoanut.

### Frame B.

*Linum usitatissimum*. Common Flax. Flax Linen. *Alsi*,  
*Tisi*, *Masina*. Natural order—Linaceæ. The Flax Fa-  
mily. It is extensively grown in the North-West Pro-  
vinces and Bengal for its oily seeds and very seldom for  
the fibre which is inferior in quality to the Egyptian Flax  
from which the mummy-cloth was manufactured.

*Corchorus Capsularis*. Jute.

Natural order—Tiliaceæ. The Jute Family.

### Frame C.

*Corchorus olitorius*. Jute.

Natural order—Tiliaceæ. The Jute Family.

*Corchorus fuscus*. Jute. Natural order—Tiliaceæ. The Jute Family.

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## CCCCXIV.

### Frame A.

*Sansevieria Zeylanica*. The Bowstring Hemp. *Murva*, *Murgli*. Natural order—Liliaceæ. The Lily Family. It is commonly found on the Coast of Guinea, in Africa, around Ceylon, and along the Bay of Bengal; and from its leaves a very tenacious and fine fibre is obtained.

*Yucca gloriosa*, Adam's needle. Natural order—Liliaceæ. The Lily Family. Native of the Southern provinces of the United States, it is now found in Bengal and Madras Presidency. It abounds in strong and fine fibre.

### Frame B.

*Musa paradisiaca*, the Plantain, *kela*. Natural order—Scitamineæ. The Ginger and Arrow-root Family. Grown all over India, its leaves and stem abound in fibres well suited for cordage, textiles, and paper.

*Elate Sylvestris*, Date Palm. Natural order—Palmaceæ. The Palm Family. It is a tropical plant and is grown in the hot and humid regions of Asia. The dried leaves are used for roofing, the manufacture of umbrellas, mats, and baskets. A sap for drink is obtained from the tree and its fruit is sweet.

### Frame C.

*Arenga Saccharifera*. Natural order—Palmaceæ. The Palm Family. It grows wild in Burma, and is commonly grown in India. The sap of the tree is a palm wine, and can be converted into sugar. Its fibre is called Gomuta Fibre, and is strong and durable.

*Caryota ureus*, Kittul Palm. Natural order—Palmaceæ. The Palm Family. It is found in India and Ceylon. The tree is very useful, and yields toddy or palm wine, its pith is used for making breads, and its leaves give very strong fibre with which ropes, brushes, brooms, baskets, and other articles are made.

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No. CCCCXV.

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No. CCCCXVI.

CASE No. CCCCXVII.

Saddlery, sword guard and belt from Indore, crowns for characters in Hindu miracle plays and marriage ceremonies from Rutlam, and a variety of Hindustani shoes and slippers. (Temporarily exhibited here).

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## CASE No. CCCCXVIII.

*Scientific Instruments described in Ganot's  
Natural Philosophy.*

Small sectional working model of a Condensing Engine.	3101
Model of a Hydraulic Press.	3102
Lift and Force Pump combined with a trough.	3103
Centrifugal Pump.	3104
Working model of a Steam boat.	3105
Pneumatic Trough with two other pieces.	3106
Model apparatus for exhibiting and illustrating the properties of the mechanical powers, viz., levers, simple and compound, pulleys of different kinds, wheel and axle, inclined plane, screw, wedge, capstan, &c., in mahogany and boxwood.	3107
Model of a Barker's Mill.	3108
Working model of a Marine Engine for a paddle-wheeled Steam boat.	3109
Rotatory Mill with spirit lamp to show the production of motion by the generation of steam.	3110
Model of a Steam Engine.	3111



Model of Archimedes' Screw or water-snail, a machine for raising water to small heights requiring little power.

3112

Working model of a High pressure Oscillating Engine.

3113

Model showing the section of Locomotive Engine.

3114

Working model of a Locomotive Engine with tender and carriages. Complete.

3115

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### CASE No. CCCCXIX.

Lac Bracelets, a various assortment and patterns from different parts of India. (Temporarily exhibited here).

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### CASE No. CCCCXX.

#### *Scientific Instruments.*

Model of a Lift Pump.

3116

Model of the Eye to illustrate the refraction of light.

3117

Electric Egg apparatus with stop cock to show the luminous electric discharge in vacuo.

3118

Apparatus to show the formation of images through a convex lens with the direction of rays.

3119

Bell with a ratchet motion to illustrate sound in vacuo (for air-pump experiments).

3120

Six's maximum and minimum Thermometer to show the  
highest and lowest temperature of the day. 3121

Spirit level. 3122

Hair Hygroscope. 3123

Wet and dry bulb Hygrometer to measure the humidity of  
air. 3124

Leyden jars for charging electricity, two. 3125

Orrery to illustrate the solar system with the various mo-  
tions of the planets. 3126

Circular disc with brass wires to show the optical effects of  
centrifugal motion. 3127

Glass flask, mounted with brass stop cock, for illustrating  
the influence of diminished pressure in facilitating ebulli-  
tion. 3128

Aurora tube with valve for exhaustion to show electric light  
in vacuo. 3129

Apparatus to illustrate the laws of centrifugal force to be  
used with the whirling table. 3130

Double whirling table to show the laws of central forces  
with all its parts. 3131

Gyroscope. 3132

Apparatus to be used with the whirling table to illustrate the laws of centrifugal force.

3133

Governor balls for the whirling table to illustrate the laws of centrifugal force.

3134

Apparatus for guinea and feather and experiment to show that both light and heavy bodies fall with equal rapidity in vacuo.

3135

Windmills or Fans with shifting vanes to show the resistance of air, ( four ).

3136

Horse-shoe magnets.

3137

Table for support.

3138

Hero's Fountain.

3139

## CASE No. CCCCXXI.

### *Scientific Instruments.*

Astatic Galvanometer for measuring electric currents.

3140

Barlow's steller formed Rotating wheel to show the effect of electric currents.

3141

Field telescope.

3142

Bar and gauge Pyrometer to show linear expansion by heat.

3143

Zoetrope, an optical toy, with a series of pictures, to illustrate the effects of persistence of vision.

3144

De la Rive's Floating battery with a coil of wire to illustrate the action of the earth's magnetism on electric currents.

3145

Model of a Diving Bell.

3146

Reflecting Goniometer.

3147

Magneto-electric machine for medical purposes.

3148

A pair of U shaped bars to show magnetisation by electric currents.

3149

Stage forcep for microscope.

3150

Glass plates for microscope.

3151

Glass slides for microscope.

3152

Electro-magnetic apparatus.

3153

Ruhmkorff's coil for inducing currents.

3154

Two Aurora tubes to show the effect of electricity in rarified gas.

3155

Sturgeon's Rotatory disc to show rotatory motion by electricity.

3156

Rain gauge.

3157

Soft Iron Electro or Induced magnet.

3158

Absorption plates for heat experiments, two.

3159

Thunder house for illustrating lightning and the principle of protecting buildings with lightning conductors.

3160

Models of apparatus to show the rotatory motion generated by electro-magnetic currents, ( two ).

3161

Electroscope or electric pendulum with a pith ball for measuring the charge of electricity.

3162

Gravesand's ring and ball to show cubical expansion by heat.

3163

Magneto-electric machine for medical purposes.

3164

Ruhmkorff's coil.

3165

Three pairs of Thermometer tubes.

3166

Double-barrelled Air-pump with Magdeburg hemispheres under a bell jar.

3167

Dipping needle with graduated circle to show the magnetic dip.

3168

Sun-dial with compass.

3169

Electro Magnetic Coil.

3170

Ramsden's Electrical Machine for generating electricity by friction.

3171

Copper globe with stop cock for gas experiments.

3172

Argand Oil Lamp with support for heating purposes.

3173

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## CENTRAL CORRIDOR.

### No. CCCCXXII.

Casts from the Indo-Bactrian figures, now in the Lahore Museum. Those which are not described as Bactrian are copies of the ornamental work at the Caves of Ajunta and Amarnath, and were presented by the Bombay Government.

Corner pillar of the base of a column with a seated figure on each of the two faces of the shaft.

3174.

Fragment of a piece from a cornice with floral patterns.

3175

Fragment of a frieze, the upper part representing Buddha seated in meditation, is receiving offering from six worshippers, three on each side; the lower frieze has a series of small niches apparently arranged in groups of three, the middle niche containing a figure of Buddha with a worshipper in each niche to the right and left. Bactrian.

3176

Portion of a frieze containing two different scenes divided by a pilaster. To the left Buddha attended by Devadatta, nearly naked, is addressing a Naga king, whose serpent tail is concealed by a sort of altar, to the right Buddha attended again by Devadatta is addressing a Dandapani (stick-bearer) or Nirgrantha leader, probably Uruvila Kasyapa. (The upper part of the frieze is all gone).

3177

Portion of a frieze containing two different scenes divided by a pilaster. To the left Buddha attended by Devadatta, nearly naked, is addressing a Naga king, whose serpent tail is concealed by a sort of altar, to the right Buddha attended again by Devadatta is addressing a Dandapani (stick-bearer) or Nirgrantha leader, probably Uruvila Kasyapa. (The upper part of the frieze is all gone).

3178

Portion of a frieze with two bands of floral patterns.

3179

Figure of a king sitting on a throne and holding a spear in his left hand. The left foot rests on a footstool. The upper part of the body is naked. The right arm is gone, but the sculpture is otherwise in excellent preservation. The head dress is richly ornamented. The eyes which are remarkably prominent are cut off square. This is perhaps the most striking figure in the Lahore Museum. The design is bold, the attitude is free, and the expression dignified. Bactrian,

3180

A squatting winged figure. Numbers of these figures have been found from 4 to 16 inches in height. They were arranged in rows to support the lowermost moulding of a building. The figures were generally separated by pilasters. Bactrian.

3181

Panel of small frieze. The Nirvana or death of Buddha, who is represented in the usual position lying on his right side, with his right hand under his head. The Sal trees are in the back ground to represent the forest, several worshippers are in attendance. Bactrian.

3182



Female figure seated on a throne with a bowl in the right hand and an indistinct object, apparently the head of an animal in the left hand (with a dog sitting on either side). Bactrian.

3183

Birth of Buddha. Maya Devi is standing under the Sal tree, supported by her half-sister Prajapati, while the infant is received by Brahma from the mother's right side. Bactrian.

3184

Two scenes on a frieze divided by pilasters. To the left Buddha attended by Devadatta is addressing a Naga, whose serpent tail is hidden by a sort of altar from which the human body rises. To the right Buddha attended by Devadatta is addressing an unknown male figure. A good piece of sculpture. Bactrian.

3185

Portion of sculpture forming the side of the capital of a shaft, the upper part has two female busts in the middle with one on each side divided by pilasters.

3186

Buddha seated on a throne in the attitude of preaching with a few adorers on either side. The symbols of Dharma Chakra and the antelope on the front of the throne appear to be indistinct. Bactrian.

3187

Portion of a frieze from the cornice with a projected niche having a seated figure in the middle and a pair of supports, for the upper portion of the moulding, on either side, in the form of fish.

3188

The upper part of a shaft with five faces, the lower part seems to spring from the head of an elephant.

3189

The upper part of the shaft of a column with five faces having female figures in niches divided by pilasters in two tiers.

3190

Portion of a frieze from a cornice with floral patterns.

3191

Portion of the capital of a pillar of an arch with a female figure shown as supporting it on her back.

3192

Panel, the upper part has probably Prince Siddhartha sitting on a throne represented as turning away from another figure with attendants on either side and his foot resting on a stool.

The lower part represents him riding through the streets of Kapilavastu, when he encountered one of the four predictive signs. Bactrian.

3193

Upper portion of the face of the capital of a column with a female figure supporting the projected portion.

3194

Portion of a sculpture representing monsters fighting in niches.

3195

Two men riding a pair of camels with other figures in the back ground. Bactrian.

3196

Gable front of a chapel. In the curved top Buddha's head-dress (chudamani) is represented as an object of worship. In the panel below, Buddha, standing, is addressing a small party of followers. Bactrian.

3197

Highly ornamented chapel. The lower part is lost, but the capitals of the side pilasters still remain as well as the flat dome surmounted by a tall upper dome. Bactrian.

3198

Buddha seated is addressing a party of monks, on the pedestal is the Dharma Chakra with an antelope on each side. Bactrian.

3199

Small panel. Two figures on horse back followed by a party of four persons carrying a shrine with fire-altar inside. Bactrian.

3200

Portion of a small frieze with a series of small niches divided by pilasters apparently arranged in groups of three, Buddha seated in the middle and a worshipper in each niche to the right and left. Bactrian.

3201

A squatting winged figure having a beard, similar to No. 3181. Bactrian.

3202

A bearded and rather emaciated figure is apparently baring his left knee for Buddha's inspection. Devadatta, half nude, stands behind Buddha carrying his curious staff in his left hand. Bactrian.

3203

Portion of the capital or the base of a column.

3204

Figure on horse back followed by an elephant carrying a chair-shaped howda. To the left a man is making an offering to the rider. Bactrian.

3205

Portion of a frieze with a seated female figure.

3206

Portion of a frieze in two bands, probably from a cornice.

3207

Face of some statue of a king with beautiful head dress.

3208

Portion of a frieze with a scroll pattern.

3209

Portion of the face of a shaft of a column.

3210

Portion of a frieze, probably from the cornice, with a scroll pattern.

3211

Corner portion of the base of a column.

3212

Fragment of a sculpture, male and female, both heads gone, the female with a short jacket, long petticoat, and large anklets. Bactrian.

3213

Circular piece of sculpture, decorated with two bands, the inner one has a series of birds following one another, and the outer one has dogs. Bactrian.

3214

Portion of a frieze with an animal figure.

3215

Face of a capital or base of a column.

3216

Portion of the decoration of a wall very near the door.

3217

Head of the statue of a king with a beautiful head dress. Bactrian.

3218

Portion of the surface decoration of a wall.

3219

Small statue of a lady, head and the right hand gone, holding a portion of the robe hanging loosely in the left hand. Bactrian.

3220

Portion of a frieze.

3221

Head of the statue of a king with a beautiful crown. Bactrian.

8222

Portion of the shaft of a pillar having four faces with figures  
in niches.

3223

### No. CCCCXXIII.

Model of a Jeypore house, School of Art, Jeypore

3224

Model of a Hindu temple. Jeypore.

3225

Model of the Yantr Samrat—The Prince of dials in the  
Jeypore Observatory. The original sundial of solid stone  
and lime is the largest in the world as its gnomon is  
89 feet high.

3226

### No. CCCCXXIV.

Model of a Cenotaph.

3227

Working model of a silk reeling machine.

3228

### No. CCCCXXV.

Model of an Irrigation dam in the Jeypore State.

3229

### EAST CORRIDOR.

### PILLAR FRAMES No. CCCCXXVI.

Series of Coins to illustrate the art of coining and to show  
the actual portraits of some of the most famous rulers of  
men.

Alexander the Great, B. C. 359-336, Greek tetradrachm,  
minted at Rhodes.

3230

Seleucus Nicator of Syria, B. C. 312-280, Silver Drachm.

3231

Arsaces, B. C. 250, founder of Parthian Empire, Drachm.

3232

Antiochus III., the Great of Syria, B. C. 223-187, Silver  
Drachm.

3233

Meander, B. C. 350? Bactrian Drachm.

3234

Cosroes II., of the Sassanian Dynasty of Persia, A. D. 592.

3235

Roman Denarius Octavius and Mark Antony.

3236

Roman (2nd) Agrippa, B. C. 28-12, brass.

3237

Roman (1st) brass of Augustus minted at Lyons, B. C. 27,  
A. D. 14.

3238

Roman (2nd) brass of the Empress Livia, wife of Augustus.

3239

Roman (2nd) brass of Caligula, A. D. 33-41.

3240

Roman, Denarius of Caligula and Augustus, A. D. 37-41.

3241

Roman (3rd) brass. Coin of Constantine the Great, A. D.  
306-337, minted at London.

3242

- Late Roman Empire, Julian the Apostate A. D. 361-363.  
3243
- Alfred the Great. A. D. 872-901. Anglo-Saxon Penny.  
3244
- William the Conqueror. English Penny struck at Chester.  
A. D. 1066-1087.  
3245
- Edward. English Penny struck at London, 1272-1307.  
3246
- Henry VIII. Tower Groat. Portrait of Henry VII., 1485-  
1509.  
3247
- Henry VIII. Tower Groat. Base Coinage, 1509-1547.  
3248
- Elizabeth. Six pence, 1562, (1558-1603).  
3249
- William III., 1700, Shilling.  
3250
- George III., 1819, Crown.  
3251
- Philip II. of Spain with English title, Dollar, 1556-1598.  
3252
- Ferdinand II. of Germany, 1626, double Thaler, struck for  
steiermark.  
3253
- Peter the Great, Russian, Ruple, 1723.  
3254
- Ferdinand Archduke of Austria, double Thaler for Alsace.  
3255



Louis XIV. of France, 1702, Crown.	3256
Louis XV. Crown of Navarre for 6 Livres. 1769.	3257
Napoleon the Great, 1806, Five France Piece.	3258

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*Medals struck in honour of great men or  
of great events.*

Lord Nelson. Struck on his death. 1805.	3259
Arthur Duke of Wellington, by Pistrucci, a fine medallic work of art (very rare).	3260
Lord Cornwallis, Governor-General of India, struck in commemoration of the conquest of Tippoo Sultan of Mysore. Presented by Colonel W. F. Prideaux, C.S.I., Resident at Jeypore.	3261
Robert Clive, Baron of Plassey.	3262
Sir Isaac Newton, Glasgow University Medal, by W. Wyon, R. A. Fine and scarce.	3263
Queen Anne. On the Peace of Utrecht, 1713.	3264
Shakespeare Jubilee Medal, 1769.	3265
Richard II., King of England and France.	3266

*Some well known Portraits of Her Majesty.*

Her Majesty in 1821, with her mother, the Duchess of Kent.

3267

Her Majesty in 1829.

3268

Her Majesty in 1836.

3269

Her Majesty in military costume at a review at Windsor, 1837.

3270

Her Majesty in 1846.

3271

Her Majesty in 1892.

3272

Her Majesty and the Duke of Connaught in 1850.

3273

A series of portraits of British Worthies of the past 300 years including sovereigns, viceroys, statesmen, poets, philosophers, clergymen, doctors, lawyers, artists, and literary men, with a short account of their lives given below.

H. R. H. the Prince of Wales.

3274

Her Majesty the Queen Empress.

3275

Henry VIII.

3276

Catharine of Aragon, wife of Henry VIII.

3277

Anne Boleyn, second wife of Henry VIII.	3278
Lady Jane Grey.	3279
Queen Elizabeth.	3280
Queen Mary.	3281
James I.	3282
Charles I.	3283
Oliver Cromwell, Lord Protector.	3284
James II.	3285
William III.	3286
Anne, Queen of England.	3287
George II.	3288
George III.	3289
George IV.	3290
H. R. H. Edward, Duke of Kent.	3291
Queen Mary II.	3292

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George I.	3293
Sir William Wallace.	3294
Thomas Cardinal Wolsey.	3295
Cecil William, Lord Burleigh.	3296
Thomas Wentworth, Earl of Strafford.	3297
John Hampden.	3298
Edmund Hyde, Lord Clarendon.	3299
William Pitt, afterwards first Earl of Chatham. "The Great Commoner."	3300
Right Honourable William Pitt.	3301
Charles James Fox.	3302
Warren Hastings.	3303
Right Honourable Edmund Burke.	3304
The Right Honourable George Canning.	3305
John, Earl of Eldon.	3306
Baron Thomas Erskine.	3307

Sir Robert Peel.	3308
Palmerston, Henry John Temple, Viscount.	3309
Lord Henry Brougham.	3310
George Hamilton Gerdon, Fourth Earl of Aberdeen.	3311
Henry Petty Fitzmaurice, Third Marquis of Lansdowne.	3312
Earl Russell, better known as Lord John.	3313
Sir Walter Raleigh.	3314
Sir Philip Sidney.	3315
John Churchill, Duke of Marlborough.	3316
Lord Robert Clive.	3317
General James Wolfe.	3318
Sir Charles James Napier.	3319
General Sir Ralph Abercromby, K.B.	3320
General Sir John Moore.	3321
Arthur Wellesley, Duke of Wellington.	3322

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Viscount Horatio Nelson.	3323
Sir James Brooke, Rajah of Sarawak.	3324
General Sir Henry Havelock.	3325
Queen Mary.	3326
John Wycliffe.	3327
William Tyndale.	3328
Archbishop Thomas Cranmer.	3329
John Knox.	3330
Rev. John Wesley.	3331
Reginald Heber, Bishop of Calcutta.	3332
William Penn.	3333
John Howard.	3334
William Wilberforce.	3335
Thomas Clarkson.	3336
Sir Samuel Romilly.	3337

Mrs. Elizabeth Gurney Fry.	3338
Richard Cobden.	3339
Mrs. Hannah More.	3340
Right Honourable Henry Grattan.	3341
Lord Verulam, Sir Francis Bacon.	3342
Sir Isaac Newton, F.R.S.	3343
Jeremy Bentham.	3344
Sir David Brewster.	3345
Sir William Herschel.	3346
Sir John Frederick William Herschel.	3347
Edward Somerset, second Marquis of Worcester.	3348
Joseph Priestley, LL. D., F.R.S.	3349
Samuel Crompton.	3350
Josiah Wedgwood.	3351
James Watt, LL.D., F.R.S.	3352



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Sir Mark Isambard Brunel.	3354
Robert Stephenson.	3355
Michael Faraday.	3356
Charles Darwin, F.R.S.	3357
Sir Hans Sloane.	3358
Sir John Soane.	3359
William Harvey, M.D.	3360
John Hunter, F.R.S.	3361
John Abernethy, F.R.S.	3362
Edward Jenner, M.D., F.R.S.	3363
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Edward Law, First Lord Ellenborough.	3365
William Caxton.	3366
Daniel Defoe.	3367

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James Boswell.	3375
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Sir John Franklin, R N., F.R.S.	3385
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Head of a woman from the Louvre. Paris. By H. Volter- ram. Louvre. 214.	3501
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La Jaconde by Leonardo da Vinci. From the Louvre,  
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3502

Fornarina, a portrait by Sebastian del Piombo (formerly  
attributed to Raphael). The original is in the Tribune  
in the Uffizi Gallery at Florence.

3503

The Violinist from the Sciarra Gallery, Rome. By Rap-  
hael (Santi Rafaello).

3504

Lion Hunt by Rubens. From the Dresden Gallery.

3505

The Vision of St. Antony, by Bartolemeo Esteban Murillo.  
From the Imperial Museum of the Hermitage. St.  
Petersberg.

3506

Portrait of Rembrandt Van Rhyn and his first wife Saskia  
by himself.

3507

Head of an old man by Leonardo da Vinci (Windsor  
Castle).

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Study of a man by Raffaello Santi (Raphael). Milan.

3509

Study of a man standing and leaning on a stick. Leonardo  
da Vinci. Milan.

3510

Portrait of Madame Le Brun and her daughter by herself.  
From the Louvre, Paris.

3511

## EAST CORRIDOR.

## WALL FRAME No. CDXXVII.

Object Lesson Card. Vegetable Kingdom. Food Plants. Illustrations of the Bean, Chick Pea, Lentil, Haricot, Vetch, Peas, Buckwheat and Mustard plants; and their seeds exhibited in small glass phials. No. 27. Emile Deyrolle, Paris.

3512

## WALL FRAME No. CDXXVIII.

Object Lesson Card. Vegetable Kingdom. Food Plants. Illustrations of the Tea plant with two specimens of tea in glass phials, the Cocoa and the Coffee plants and their seeds in glass phials. No. 28. Emile Deyrolle, Paris.

3513

## WALL FRAME No. CDXXIX.

Object Lesson Card. Vegetable Kingdom. Cereals. Illustrations of the plants Oat, Rice, Maize, Millet, Rye, Double-barley, Barley, and Wheat, and their seeds in glass phials. No. 29. Emile Deyrolle, Paris.

3514

## WALL FRAME No. CDXXX.

Object Lesson Card. Vegetable Kingdom. Corn and Bread. Specimens of wheat employed in grinding flour and the constituents of the flour, the process of making bread, the uses of starch and food pastes. No. 30. Emile Deyrolle, Paris.

3515

## WALL FRAME No. CDXXXI.

Object Lesson Card. Vegetable Kingdom. Illustrations of the plants Cinnamon, Clove, Vanilla, Black Pepper and Nutmeg and the samples of their commercial products. No. 31. Emile Deyrolle, Paris.

3516

## WALL FRAME No. CDXXXII.

Object Lesson Card. Vegetable Kingdom. Illustrations of the plants which yield sugar, namely, the Sugar-cane, the Beet root, and the sugar Maple tree, and the samples of the sugar manufactured from them exhibited in small glass phials. No. 32. Emile Deyrolle, Paris.

3517

## WALL FRAME No. CDXXXIII.

Object Lesson Card. Vegetable Kingdom. Oil-yielding plants. Illustrations of the Sesamum, Ground-nut, Castor, and Palm, and the samples of their seeds as well as those of other oil-yielding plants (cocoa, olive, and nut). No. 33. Emile Deyrolle, Paris.

3518

## WALL FRAME No. CDXXXIV.

Object Lesson Card. Vegetable Kingdom. Oil-yielding plants. Illustrations of the Colza, Camlin, Poppy, and Almond, specimens of their seeds as well as those of other plants (Hemp, Flax, and Rape) which also produce oil. No. 34. Emile Deyrolle, Paris.

3519

## No. CDXXXV.

Octagonal Show Case, containing specimens of Nottingham Lace, Japan Sari, &c., &c. (Temporarily placed here).

## No. CDXXXVI.

Octagonal Show Case, containing Central India Textiles. (Temporarily placed here).



## CASE No. CDXXXVII.

(Temporarily placed in the Central Room).

Model of the "Welcome" Gold-Nugget, found in 1858 at  
Bakeny Hill, Ballarat, Australia.

Weight of the original nugget 2,166 oz.

Pure gold 2,019 $\frac{3}{4}$  oz.

Value of the gold £8,376 10s. 6d.

3520

## SMALL SHOW CASE No. CDXXXVIII.

(Temporarily placed in the Central Room).

Collection of Indian Salt specimens. From Sambhar and  
other Salt lakes and the Punjab mines. Specimens of Salt  
crystals (11).

3521-31

Tumbler and saucer.

3532-3

Cup on stand.

3534

Tumbler and saucer.

3535-6

Rosary of salt beads.

3537

Two models of eggs in salt.

3538-9

## CASE No. CDXXXIX.

## No. CDXL.

Revolving Pillar Frames in which are exhibited a variety of patterns of Sangar Chintzes. (Temporarily placed here).

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## WALL FRAMES Nos. CDXLI-CDXLIX.

Coloured facsimile of the Egyptian Papyrus in the British Museum. It contains a series of chapters belonging to the collection of religious texts known by the name of the *Book of the Dead*, accompanied by coloured vignettes which are among the most beautiful and interesting of their kind that are known. The Hieroglyphic text is a valuable copy of the Theban recension of the *Book of the Dead*.

The person whose name the Papyrus bears is named Ani, a "Royal Scribe" and "Scribe of the Sacred Revenue of all the gods of Thebes." He also had charge of the granaries of the Lords of Abydos, about B. C. 1370 His wife, Tutu, was a Kemait of Amon, the great god of Thebes, and she is represented as accompanying her husband at the final judgment and on other solemn occasions. She bears in her right hand the Sistrum and in the left a nosegay and the symbol Menat used to propitiate the gods. The manuscript was most probably written about the end of the 14th century B. C., and like others of its kind was intended to give Might to the departed and to enable him to enjoy the privileges of his new life.

Presented by the Trustees of the British Museum.

3540

## WALL FRAME No. CDL.

Forum Romanum. Chromo-lithograph by Hoeltz of Vienna.

3541

## WALL FRAMES Nos. CDLI &amp; CDLII.

Genealogical chart of the princes of Rajputana with lengths  
of their reigns on the scale of ten years to an inch by  
Jwálá Sálái, author of *Wiqúdyá Rajputáná*.

3542

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No. CDLIII.

3543

---

No. CDLIV.

3544

## MINERAL KINGDOM No. I.

## WALL FRAME No. CDLV.

Object Lesson Card. Mineral Kingdom—History of the Earth. Specimens of the non-sedimentary, volcanic, sedimentary and primary rocks and a few fossils belonging to the primary rock with their nomenclature and uses. No. 78. Emile Deyrolle, Paris.

3545

## WALL FRAME No. CDLVI.

Object Lesson Card. Mineral Kingdom—History of the Earth. Specimens of the rocks and illustrations of the vertebrated animals of the Secondary strata and those of the Tertiary strata. No. 79. Emile Deyrolle, Paris.

3546

## WALL FRAME No. CDLVII.

Object Lesson Card. Mineral Kingdom—Quaternary and Recent Periods. Specimens of the rocks, fossils, and vegetable earth. No. 80. Emile Deyrolle, Paris.

3547

## WALL FRAME No. CDLVIII.

Object Lesson Card. Mineral Kingdom—History of the Earth. Specimens of special mineral products employed in industry with their nomenclature and uses. No. 81. Emile Deyrolle, Paris.

3548

## WALL FRAME No. CDLIX.

Object Lesson Card. Mineral Kingdom—Terracotta. Earthen-ware. Specimens illustrating the process of the manufacture and decoration of Crockery and Porcelain. No. 70. Emile Deyrolle, Paris.

3549

## WALL FRAME No. CDLX.

Object Lesson Card. Mineral Kingdom—Porcelain-kiln and the process of manufacturing porcelain. No. 71. Emile Deyrolle, Paris.

3550

## WALL FRAME No. CDLXI.

Object Lesson Card. Mineral Kingdom—Glass. Specimens of the substances employed in the manufacture of Glass bottles, of the various stages of Glass in a state of fusion and the process of refining it. No 72. Emile Deyrolle, Paris.

3551

## WALL FRAME No. CDLXII.

Object Lesson Card. Mineral Kingdom—Glass works. The manufacture of glass bottles. No. 73. Emile Deyrolle, Paris.

3552

## SMALL BLACK CASE (Old) No. CDLXIII.

*Containing Chemistry of Food.*

The constituents of one pint of Brandy :—

(A good sample contained 74 grs. sugar, 61½ grs. solid fixed matter per pint, and was of proof strength. Proof spirit contains 49¼ per cent. of absolute alcohol).

Alcohol.

3553

Sugar.

3554

Water.

3555

## The constituents of one pint of Arrack.

Water.	3556
Alcohol.	3557
Mineral matter.	3558
Sugar.	3559

---

## The constituents of one pint of Opium.

Mineral Matter.	3560
Nitrogenous or flesh forming matter.	3561
Water.	3562
Morphine.	3563
Sugar and Dextrine.	3564
Residue.	3565

Opium is the dried milky juice of the opium poppy. It contains morphine 7 to 14 per cent.

---

## The constituents of one pound of Pepper :—

Fatty matter.	3566
Water.	3567
Starch.	3568
Residue.	3569

## The constituents of one pint of Milk :—

Fatty matter.	3570
Mineral matter.	3571
Nitrogenous or flesh forming matter.	3572
Sugar.	3573
Water.	3574

## Cow's MILK.

*Average composition.*

	In 100 parts.	In 1 pint. oz. grs.
Water ...	86.8	17.330
Casein and other albuminoids ...	4.1	0.870
Milk fat ...	3.7	0.330
Milk sugar ...	5.1	1.22
Mineral matter ...	0.8	0.72
Total solids 13.7 per cent.		

Ratio of flesh formers to heat givers 1 to  $3\frac{1}{2}$ —1 pint equals 1 lb.  $4\frac{3}{4}$  oz. Force equals per 1 lb. 390 foot tons. Work equivalent to 78 foot tons. Milk is a model food for the young immature animal.

## The constituents of one pound of eggs ( without shell ) :—

Nitrogenous or flesh forming matter.	3575
Mineral matter.	3576
Fatty matter.	3577
Water.	3578



## EGGS:—HEN'S EGGS.

Composition in 100 parts.

Shell 100.

White 610.

Yolk 290.

Average weight  $1\frac{3}{4}$  oz.

## Composition (Chemical).

	White.	Yolk.	Mixed in 100 parts.
Water	84.8	51.5	71.7
Albumen	12.0	15.0	14.0
Fat	2.0	30.0	11.0
Pigment and membranes }	...	2.1	2.0
Mineral matter	1.2	1.4	1.3

The constituents of one pound of average Fish (Mackerel):—

Fatty matter. 2 oz.	3579
Mineral matter. 371 grains.	3580
Nitrogenous or flesh forming matter. 2 oz. 70 grains.	3581
Water. 10 oz. 434 grains.	3582

The constituents of one pound of Mutton:—

Mineral matter. 245 grains.	3583
Nitrogenous or flesh forming matter. 1 oz. 437 grains.	3584
Fatty matter. 6 oz. 176 grains.	3585
Water. 7 oz. 16 grains.	3586

The constituents of one pound of Coffee (*Coffea Arabica*) :—

Mineral matter. 399 grains.	3587
Water. 1 oz. 122 grains.	3588
Tannin. 2 oz. 105 grains.	3589
Nitrogenous or flesh forming matter. 2 oz. 175 grains.	3590
Sugar and other Carbonaceous matter. 8 oz. 336 grains.	3591
Residue. 175 grains.	3592

Coffee obtained from a plant—The *Coffea Arabica*.

Composition	In 100 parts	In 1 lb. oz. gr.
Water ...	5.0	0.350
Albuminoids ...	15.0	2.175
Theine of Coffeine ...	0.6	0.42
Tannin ...	4.0	0.280
Minor extractives ...	34.4	5.220
Cellulose ...	38.4	6.63
Mineral matter ...	4.6	0.322

Coffee has a stimulating effect on the circulatory and nervous systems.

The constituents of one pound of Cocoa (*Theobroma Cocoa*) :—

Mineral matter. 252 grains.	3593
Starch. 1 oz. 122 grains.	3594
Water. 350 grains.	3595
Nitrogenous or flesh forming matter. 2 oz. 315 grs.	3596
Fatty matter. 8 oz. 70 grains.	3597
Residue. 1 oz. 641 grains.	3598

The constituents of one pound of Tea (*Thea Sinensis*) :—

Sugar.	3599
Fatty matter. 28 grains.	3600
Residue. 8 oz. 483 grains.	3601
Tannin. 2 oz. 105 grains.	3602
Nitrogenous or flesh forming matter, 2 oz. 175 grains.	3603
Mineral matter. 399 grains.	3604
Water. 1 oz. 122 grains.	3605

---

Tea obtained from the plant—*Thea Sinensis*.

		In 100 parts.	In 1 lb. oz. gr.
Water	...	8.4	1.122
Theine	...	2.5	0.175
Tannin	...	14.0	2.105
Essential Oil	...	0.4	0.28
Minor extractives	...	15.0	2.175
Insoluble organic matter	...	54.4	8.308
Mineral matter	...	5.7	0.399

The infusion of tea has little nutritive value, but it increases respiratory action and excites the brain to greater activity.

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The constituents of one pound of Lentils (*Ervum lens*) :—

Fatty matter. 182 grains.	3606
Nitrogenous or flesh forming matter. 3 oz. 367 grains.	3607
Starch. 8 oz. 453 grains.	3608
Water. 2 oz. 140 grains.	3609
Mineral matter. 210 grains.	3610

The constituents of one pound of Peas (*Pisum Sativum*):—

Sugar. 1 oz. 17 grains.	3611
Water. 2 oz. 126 grains.	3612
Starch. 8 oz. 91 grains.	3613
Nitrogenous or flesh forming matter. 3 oz. 255 grains.	3614
Fatty matter. 175 grains.	3615
Mineral matter. 210 grains.	3616

---

The constituents of one pound of Tobacco :—  
(*Nicotiana Tabacum*).

Nicotine.	3617
Sugar.	3618
Nitrogenous or flesh forming matter.	3619
Residue.	3620
Water.	3621
Mineral matter.	3622
Resin.	3623

Tobacco obtained from *Nicotiana Tabacum*. Mineral matter 13 to 28 per cent. Nicotine (a narcotic) 2 to 6 per cent. or even 10 per cent. Water about 13 per cent.

## The constituents of one pint of Goat's Milk.

Mineral matter.	3624
Fatty matter.	3625
Nitrogenous or flesh forming matter.	3626
Sugar.	3627
Water,	3628

---

## The constituents of one pound of Maize (Zea Mäys) :—

Fatty matter. 350 grains.	3629
Nitrogenous or flesh forming matter. 1 oz. 193 grains.	3629 bis
Starch. 10 oz. 490 grains.	3630
Water. 2 oz. 140 grains.	3631
Mineral matter. 140 grains.	3632

---

## The constituents of one pound of Rye (Secale Cereale):—

Mineral matter. 112 grains.	3633
Fatty matter. 66 grains.	3634
Water. 2 oz. 35 grains.	3635
Starch. 11 oz. 318 grains.	3636
Nitrogenous or flesh forming matter. 1 oz. 298 grains.	3637

The constituents of one pound of Rice (*Oryza Sativa*):—

Mineral matter. 35 grains.	3638
Nitrogenous or flesh forming matter. 1 oz. 87 grains.	3639
Fatty matter. 35 grains.	3640
Water. 2 oz. 147 grains.	3641
Starch. 12 oz. 133 grains.	3642

---

The constituents of one pound of Ground Nuts:—

Starch. 1 oz. 697 grains.	3643
Water. 1 oz. 97 grains.	3644
Mineral matter. 126 grains.	3645
Fatty matter. 8 oz.	3646
Nitrogenous or flesh forming matter. 3 oz. 403 grains.	3647

---

The constituents of one pound of Wheat:—

(*Triticum vulgare*),

Fatty matter. 84 grains.	3648
Mineral matter. 119 grains.	3649
Nitrogenous or flesh forming matter. 1 oz. 332 grains.	3650
Starch. 11 oz. 119 grains.	3651
Water. 2 oz. 140 grains.	3652

The constituents of one pound of Potatoes :—  
(*Solanum tuberosum* ).

Sugar. 140 grains.	3653
Fatty matter. 21 grains.	3654
Mineral matter. 70 grains.	3655
Nitrogenous or flesh forming matter. 161 grains.	3656
Water. 12 oz.	3657
Starch. 2 oz. 280 grains.	3658

---

The constituents of one pound of Millet :—

Fatty matter. 315 grains.	3659
Mineral matter. 98 grains.	3660
Nitrogenous or flesh forming matter. 1 oz. 283 grains.	3661
Starch. 10 oz. 511 grains.	3662
Water. 2 oz. 105 grains.	3663

---

The constituents of one pound of Beans (*Phaseolus vulgaris*).  
Haricot and French Beans.

Mineral matter. 203 grains.	3664
Fatty matter. 161 grains.	3665
Water. 2 oz. 105 grains.	3666
Nitrogenous or flesh forming matter. 3 oz. 297 grains.	3667
Starch. 8 oz 546 grains.	3668



The constituents of one pound of Onions (*Allium Cepa*):—

Fatty matter. 14 grains.	3669
Nitrogenous or flesh forming matter. 105 grains.	3670
Mineral matter. 35 grains.	3671
Sugar. 336 grains.	3672
Water. 14 oz. 245 grains.	3673
Starch. 140 grains.	3674

#### Onions—Bulb of *Allium Cepa*

Contain 1 part flesh formers and  $3\frac{1}{2}$  parts heat givers.

			In 100 parts.	In 1 lb. oz. gr.
Water	...	...	91 0	14·245
Albumen	...	...	1·5	0·105
Mucilage and Pectose	...	...	4·8	0·336
Fat	...	...	0·2	0·14
Cellulose and lignose	...	...	2·0	0·140
Mineral matter	...	...	0·5	0·35

One pound produces not quite  $\frac{1}{4}$  oz. of dry nitrogenous substance of flesh.

#### The constituents of one pound of Cabbage (*Brassica oleracea*).

Mineral matter.	3675
Fatty matter.	3676
Starch.	3677

Water.	3678
Sugar.	3679
Residue.	3680

Cabbage (*Brassica oleracea*).

		In 100 parts	In 1 lb. oz. gr.
Water	...	89.0	14.105
Albumen	...	1.5	0.105
Sugar, starch, and gum	...	5.8	0.406
Fat	...	0.5	0.35
Cellulose and lignose	...	2.0	0.140
Mineral matter	...	1.2	0.84

For 1 part of flesh formers there are  $4\frac{2}{3}$  parts of heat givers. 1 lb. contains about  $\frac{1}{4}$  oz. of dry nitrogenous flesh formers.

## The constituents of one pound of Bananas

( *Musa Sapientum* ).

Fatty matter. 42 grains.	3681
Starch. 14 grains.	3682
Mineral matter. 56 grains.	3683
Sugar. 3 oz. 66 grains.	3684
Water. 11 oz. 361 grains.	3685
Nitrogenous or flesh forming matter. 336 grains.	3686

The constituents of one pound of Bread Fruit  
( *Artocarpus incisa* ).

Starch.	3687
Nitrogenous or flesh forming matter.	3688
Water.	3689

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The constituents of one pound of Yams ( *Dioscorea alata* ).

Starch. 2 oz. 259 grains.	3690
Fatty matter. 35 grains.	3691
Mineral matter. 105 grains.	3692
Nitrogenous or flesh forming matter. 154 grains.	3693
Water. 12 oz. 322 grs.	3694

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The constituents of one pound of Barley ( *Hordeum vulgare* ).

Nitrogenous or flesh forming matter. 434 grains.	3695
Fatty matter. 91 grains.	3696
Mineral matter. 77 grains.	3697
Sugar. 3 oz. 56 grains.	3698
Starch. 12 oz. 70 grains.	3699
Water. 2 oz. 147 grains.	3700

## WALL FRAME No. CDLXIV.

Object Lesson Card. Mineral Kingdom. No. 1. The Crust of the Earth, as it is and as it was. Oliver and Boyd. London.

3701

## WALL FRAME No. CDLXV.

Object Lesson Card. Mineral Kingdom. No. 2. Gold. Specimens of a model of gold nugget and leaf with explanatory notes showing what it is, where it is found, and what are its uses. Oliver and Boyd. London.

3702

## WALL FRAME No. CDLXVI.

Object Lesson Card. Mineral Kingdom. No. 3. Silver, Lead, and Zinc. Specimens of their products with explanatory notes. Oliver and Boyd, London.

3703

## WALL FRAME No. CDLXVII.

Object Lesson Card. Mineral Kingdom. No. 4. Iron. Specimens of its commercial products with an account giving the names of places where Iron ores are chiefly to be found, and the process of extracting the metal from the ore. Oliver and Boyd, London.

3704

## WALL FRAME No. CDLXVIII.

Object Lesson Card. Mineral Kingdom. No. 66. Copper. Specimens of its ores and other artificial products illustrating its uses. Emile Deyrolle, Paris.

3705

## WALL FRAME No. CDLXIX.

Object Lesson Card. Mineral Kingdom. No. 67. Lead.  
Specimens of ores and other products illustrating the  
treatment of lead and its uses. Emile Deyrolle, Paris.

3706

## WALL FRAME No. CDLXX.

Object Lesson Card. Mineral Kingdom. No. 64. Zinc.  
Specimens of its ores and other commercial products  
illustrating its treatment and use. Emile Deyrolle,  
Paris.

3707

## WALL FRAME No. CDLXXI.

Object Lesson Card. Mineral Kingdom. No. 65. Zinc  
furnace illustrating the moulding of zinc ingots. Emile  
Deyrolle, Paris.

3708

## WALL FRAME No. CDLXXII.

Object Lesson Card. Mineral Kingdom. No. 62. The  
manufacture of Iron. Emile Deyrolle, Paris.

3709

## WALL FRAME No. CDLXXIII.

Object Lesson Card. Mineral Kingdom. No. 63. The  
manufacture of Steel. Emile Deyrolle, Paris.

3710

## SHOW CASE No. CDLXXIV.

Models, in clay, of workers in mineral products, illustrating the occupations, industries, and domestic life of people of North India.

	3711
Gold-thread maker.	3712
Wire-drawers.	3713
Wire-beater. <i>Dabkaiya.</i>	3714
Lace maker. <i>Tarkash.</i>	3715
Lace-maker. <i>Tarkash.</i>	3716
Lace-maker. <i>Tarkash.</i>	3717
Gold-thread maker.	3718
Potter's kiln.	3719
Brazier.	3720
Coin seller. <i>Sharaf.</i>	3721
Engraver on brass. <i>Nakkas.</i>	3722
Lace-wire drawers.	3723

Sculptor carving a figure of a lion.	343	
Salt-seller.	3724	
	3725	
Men, nailing pieces of iron into the heels of country leather shoes.		7
Lace makers. <i>Tarkash.</i>	3726	r. s-
Lace-fringe maker. <i>Kiran bananewala.</i>	3727	58
Potter's wife with pots for sale.	3728	759
Potter with his wheel.	3729	er to 3760
Wife of a potter with pots and chillams for sale.	3730	
Potter with his wheel.	3731	
Potter at work on a table.	3732	
Blacksmith.	3733	
Blacksmith's wife, blowing the bellows.	3734	3765
Peasant Jewellery moulder.	3735	3766
Shop of seller of peasant Jewellery.	3736	3767
Shop of seller of Jewellery.	3737	



Shop of seller of peasant Jewellery.	3739
Chhabeel. Place where water is kept ready for the Moham- madans to drink free.	3740
Shop of a blacksmith, with locks, &c.	3741
Shop of plated Jewellery.	3742
Shop of plated wares.	3743
Painter, drawing the picture of a yellow bird.	3744
Painter, drawing the picture of a peacock.	3745
Maker of Sitar or harps.	3746
Goldsmith drawing wire.	3747
Shop of peasant Jewellery.	3748
Lace-seller.	3749
Lace-weaver.	3750
Lace-stamper.	3751
Lace-stamper.	3752

	345
Three embroiderers, working on one piece of cloth.	3754
Embroiderer at work.	3755
Potter's Workshop.	3756
Iron salesman. <i>Lohiya</i> .	3757
Illustration of the shoeing of a bullock. Made by G. V. Dongre, and bought at the Bombay Art Society's Industrial Art Exhibition in Bombay in 1890.	3758
Shop of brassware. <i>Kasere ki dukan</i> .	3759
<i>Pyau</i> . The place where a man sits ready to give water to Hindu passers-by.	3760
Polisher, sharpening an iron dagger.	3761
Arm-makers' shop.	3762
Damasceners' Workshop.	3763
Enamellers' Workshop.	3764
Enameller at work.	3765
Enameller at work.	3766
Man setting in stones in jewellery.	3767

Man setting stones in jewellery.	3768
Stud setter.	3769
Bead necklace sellers.	3770
Goldsmiths' Workshop.	3771
Wire-drawer.	3772
Goldsmith's shop.	3773
Goldsmith's shop.	3774
Lace-seller.	3775
House of a nobleman or <i>haweli</i> .	3776
Stamper of cloths with gold or silver leaves.	3777
Leaf-beaters, ( gold or silver ).	3778
Two men settling accounts.	3779
Stud-maker's Workshop.	3780
Jewel stud-maker.	3781
Braziers at work while repairing.	3782

	347
Man selling brass wares.	3783
Braziers' Workshop, <i>Thatheron-ka-karkhana</i> .	3784
Brass workers on trays, en repoussé.	3785
Carpenters' workshop for preparing fine brass wares of chased and embossed workmanship, &c.	3786
Polishers' Workshop.	3787
Man tinning cooking vessels.	3788
Tin-solderers' Workshop.	3789
Man selling brass and copper domestic vessels for native use.	3790
Haberdashers' shop.	3791
Haberdashers' shop.	3792

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### WALL FRAME No. CDLXXV.

Object Lesson Card. Mineral Kingdom. No. 58. Coal. Specimens of the products obtained from the residue and their use. .Emile Deyrolle, Paris.	3793
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### WALL FRAME No. CDLXXVI.

Object Lesson Card. Mineral Kingdom. No. 59. Coal mines and how they are worked. Emile Deyrolle, Paris.	3794
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## WALL FRAME No. CDLXXVII.

Object Lesson Card. Mineral Kingdom. No. 56. Specimens of the principal kinds of coal and illustrations of a few plants from the coal mines. Emile Deyrolle, Paris.

3795

## WALL FRAME No. CDLXXVIII.

Object Lesson Card. Mineral Kingdom. No. 57. Coal. Manufacture of gas for lighting. Emile Deyrolle, Paris.

3796

## WALL FRAME No. CDLXXIX.

Object Lesson Card. No. 54. Specimens of materials employed in the manufacture of paper and its different kinds. Emile Deyrolle, Paris.

3797

## WALL FRAME No. CDLXXX.

Object Lesson Card. No. 55. The machinery employed in the manufacture of paper. Emile Deyrolle, Paris.

3798

## SMALL BLACK CASE No. CDLXXXI.

*Containing Crystals (natural and artificial)  
in glass vases.*

Iodide of Potassium.

3799

Zinci Sulpho Carbolate.

3800

	349
Ammonio-Chloride of Iron.	3801
Sulphate of Ammonia.	3802
Tungstate of Soda.	3803
Metallic Bismuth.	3804
Permanganate of Potash.	3805
Sulphate of Cobalt.	3806
Metallic Arsenic.	3807
Sugar of Milk.	3808
Hydrargyrum ( Quicksilver ).	3809
Benzoic Acid.	3810
Sulphate of Nickel.	3811
Monobromate of Camphor.	3812
Phosphate of Soda.	3813
Cobalt.	3814
Oxalic Acid.	3815

Salicylic Acid.	3816
Nitrate of Uranium.	3817
Pure Carbazotate of Ammonia.	3818
Tartrate of Sodium.	3819
Chloride of Barium.	3820
Metal Nickel.	3821
Sulphate of Cadmium.	3822
Protonitrate of Mercury.	3823
Resublimed Iodine.	3824
Nitrate of Silver.	3825
Benzoate of Ammonia.	3826
Pure Urea.	3827
Iodoform.	3828
Chromic Acid.	3829
Antimony.	3830



	351
Sulphate of Potassium.	3831
Recrystalized Nitrate of Silver.	3832
Pure Ferrocyanide of Potassium.	3833
Sulphate of Zinc.	3834
Best Sulphate of Copper.	3835
Hyposulphite of Sodium.	3836
Nitrate of Strontium.	3837
Ammonio-Sulphate of Iron.	3838
Ammonia Alum.	3839
Sulphate of Magnesium (Epsom Salts).	3840
Chrome Alum.	3841
Biborate of Soda.	3842
Sulphate of Iron.	3843
Potash Alum.	3844
Sulphate of Manganese.	3845

Ferrocyanide of Potassium.	3846
Yellow Prussiate of Potash ( Ferrocyanide of Potassium. $K_4 Fe Cy_6$ ).	3847
Red Prussiate of Potash ( Ferrocyanide of Potassium. $K_3 Fe Cy_6$ ).	3848
Alum Crystals.	3849
Sulphate of Copper.	3850
Molybdate of Ammonium.	3851
Pure Oxalate of Ammonium.	3852
Bichromate of Potassium.	3853
Carbonate of Sodium Crystals.	3854
Arseniate of Sodium.	3855
Chromate of Potassium.	3856
Citric Acid Crystals.	3857
Sodium Sulphate. ( Glauber's Salt ).	3858
Red Chromate of Potassium. $K_2 Cr O_4 Cr O_5$ .	3859
Arsenious Acid.	3860

	353
Tartaric Acid, Crystals.	
	3861
Oxalate of Potassium.	
	3862
Nitrate of Ammonium.	
	3863
Naphthaline.	
	3864
Chlorate of Potassium.	
	3865
Nitrate of Potassium.	
	3866
Thymol.	
	3867
Glass models of Crystals. Case I.	
	3868
Glass models of Crystals. Case II.	
	3869

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### No. CDLXXXII.

Shelf, carved, filled with glass stoppered bottles, intended to contain specimens of Mineral products.

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### No. CDLXXXIII.

Niche Case to contain specimens from the Mineral Kingdom.

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## No. CDLXXXIV.

Shelf, carved wood, filled with glass stoppered phials, intended to contain specimens from the Mineral Kingdom.

## BOARD No. CDLXXXV.

*Carpenter's Tools supplied by Messrs. J. C. W.  
Lord & Co., Birmingham.*

Circular Saw.	3870
Saws (four).	3871-74
Files (ten).	3875-84

## No. CDLXXXVI.

Shelf, carved, filled with glass stoppered phials for mineral specimens.

## BOARD No. CDLXXXVII.

*Tools supplied by Messrs. J. C. W. Lord & Co.,  
Birmingham.*

Best Wand Anvil.	3885
Anvil, clothed.	3886
Black-smith's Rake.	3887
Black-smith's Poker.	3888
Black-smith's Shovel.	3889

	355
Black-smith's C. S. Cold Set.	3890
Black-smith's Hammer.	3891
Black-smith's Hot Set.	3892
Black-smith's Close-mouth Tongs.	3893
Black-smith's Open-mouth Tongs.	3894
Black-smith's Top Swage.	3895
Black-smith's C. S. Round Punch.	3896
Black-smith's C. S. Square Punch.	3897
Black-smith's Bottom Swage.	3898
Black-smith's C. S. Square drift.	3899
Black-smith's C. S. Round drift.	3900
Black-smith's Bottom fuller.	3901
Black-smith's Top fuller.	3902
Black-smith's Bottom fuller.	3903
Black-smith's Top fuller.	3904

## No. CDLXXXVIII.

Shelf, carved, filled with glass stoppered phials for mineral products.

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## WALL FRAME No. CDLXXXIX.

Object Lesson Card. Mineral Kingdom. No. 13. Clay. Specimens of unglazed Earthenware, Tobacco-pipe, and Porcelain, with explanatory notes describing the process of manufacturing Pottery. Oliver and Boyd, London.

3905

## WALL FRAME No. CDLXXXX.

Object Lesson Card. Mineral Kingdom. No. 14. Type metal. Specimens of types, papier-mache mould, and stereotype plate with a short history of the art of printing. Oliver and Boyd, London.

3906

## WALL FRAME No. CDLXXXXI.

Object Lesson Card. Mineral Kingdom. No. 61. Illustration of the blast Furnace to melt iron ores for iron castings. Emile Deyrolle, Paris.

3907

## WALL FRAME No. CDLXXXXII.

Object Lesson Card. Mineral Kingdom. No. 60. Specimens of the principal iron ores, of the hydrated oxides of Iron, and of a few objects illustrating the uses of Cast iron. Emile Deyrolle, Paris.

3908

## WALL FRAME No. CDLXXXIII.

Object Lesson Card. Mineral Kingdom. No. 11. Specimens of Coal, Paraffin, Aniline Colours, and Jet, with explanatory notes. Oliver and Boyd, London.

3909

## WALL FRAME No. CDLXXXIV.

Object Lesson Card. Mineral Kingdom. No. 12. Sand. Specimens of Glass beads and Crystals, with an account of the manufacture of Glass. Oliver and Boyd, London.

3910

## BOARD No. CDLXXXV.

*Tools supplied by Messrs. J. C. W. Lord & Co.,  
Birmingham.*

Firmer Chisels, assorted. No. 1.	3911
Corner Chisels, assorted. No. 2.	3912
Straight Gauges, assorted. No. 3.	3913
Straight Gauges. No. 4.	3914
Straight Gauges. No. 5.	3915
Straight Gauges. No. 6.	3916
Straight Gauges. No. 7.	3917
Straight Gauges. No. 8.	3918



Straight Gauges. No. 11.	
Curved Gauges. No. 15.	3919
Curved Gauges. No. 16.	3920
Curved Gauges. No. 19.	3921
Curved Gauges. No. 20.	3922
Best Chisels. No. 21.	3923
Front bent Gauges. No. 26.	3924
Front bent Gauges. No. 27.	3925
Back bent Gauges. No. 36.	3926
Parting Tool. No. 40.	3927
Parting Tool. No. 41.	3928
Parting Tool. No. 42.	3929
	3930
<i>Ladies' Carving Tools.</i>	
Straight Gauge.	
Front bent Gauge.	3931
	3932

	359
Parting Tool.	3933
Parting Tool.	3934
Best Scotch screw-eyed augur.	3935
Best Scotch screw-eyed augur.	3936
Best Scotch screw-eyed augur.	3937
Bright screw-eyed augur bits.	3938
Bright screw-eyed augur bits.	3939
Bright screw-eyed augur bits.	3940
Shell gimblets.	3941
Twist gimblets.	3942
Twist gimblets.	3943
Shell gimblet.	3944
Augur.	3945
Gent's TurnscREW.	3946
London TurnscREW.	3947

Cabinet Turnscrew.	3948
Best spoke shave.	3949
Best Tower-cutting slippers.	3950
Black Carpenter's Pincers.	3951
Nail Puller.	3952

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No. CDLXXXXVI.

Shelf, carved, filled with glass stoppered bottles.

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BOARD No. CDLXXXXVII.

Hammer.	3953
Odze Eye Hammer.	3954
Bright Kent Hammer.	3955
Rivetting Hammer.	3956
Best Canterbury Hammer.	3957
London Pattern Hammer.	3958
Kent Pattern Hammer.	3959

	361
Hand drill and bits.	3960
• Watch-maker's files, half dozen.	3961
Black hand-shears, one pair.	3962
Jeweller's pliers, one pair.	3963
Drill stock and drill.	3964
Engraver's tools.	3965
Rule compass.	3966
Feat nose pliers, one pair.	3967
Best tower pincers, one pair.	3968
Bright Feat nose pliers, one pair.	3969
King compasses, one pair.	3970
Tool pad.	3971
Cutting line fillet.	3972
Polishing iron.	3973
Shears, one pair.	3974

Blow-pipe.

3975

Brass Gilding tools and cut M.R.D.E.B.H.

3976

Pocket calipers, one pair.

3977

### No. CDLXXXXVIII.

Shelf, carved, filled with glass stoppered phials for specimens from the Mineral Kingdom.

### WALL FRAME No. CDLXXXXIX.

Object Lesson Card. Mineral Kingdom. No. 9. Specimens of Sandstone, Limestone, Writing Slate, and Slate Pencil with notes on their uses. Oliver and Boyd, London.

3978

### WALL FRAME No. D.

Object Lesson Card. Mineral Kingdom. No. 10. Specimens of Granite and Marble with explanatory notes. Oliver and Boyd. London.

3979

### WALL FRAME No. DL.

Object Lesson Card. Mineral Kingdom. No. 68. Terracottas. Specimens of objects illustrating the processes in the manufacture of bricks and tiles, common pottery, varnished pottery, and stone ware. Emile Deyrolle, Paris.

3980

## WALL FRAME No. DII.

Object Lesson Card. Illustration of the Potter's kiln and the process of manufacturing pottery. No. 69. Emile Deyrolle, Paris.

3981

## WALL FRAME No. DIII.

Object Lesson Card. Mineral Kingdom. No. 7. Tin and Pewter specimens of Tin ore, Tin ware, and Pewter toy with explanatory notes. Oliver and Boyd, London.

3982

## WALL FRAME No. DIV.

Object Lesson Card. Mineral Kindom. No. 8. Mercury or Quicksilver. Specimens of mirror and vermillion with the uses of mercury in art manufactures. Oliver and Boyd, London.

3983

## No. DV.

*Carpenter's Tools.*

Japanned square-eye carpenter's Adze.

3984

C. S. blued eye carpenter's Adze.

3985

C. S. blued eye Wheelers.

3986

American Bench Vice.

3987

American Bench Vice.

3988

Brass plated Brace and bits, revolving Handles, and 24 straw coloured bits.

3989

Best nickel-plated Scotch Iron Brace with bits.	3990
Brass plated Brace and eighteen straw coloured bits.	3991
Iron brace with bits.	3992
Scotch brace with bits.	3993
Back Saw.	3994
Hand Saw.	3995
Hand Saw.	3996
Back Saw.	3997

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### No. DVI.

Shelf, carved, filled with glass stoppered phials to contain  
Mineral products.

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### BOARD No. DVII.

#### *Carpenter's Tools.*

Turnscrew.	3998
Hatchet.	3999
Handled Bradawl.	4000
Smoothing plane.	4001



	365
Jack plane.	4002
Trying plane.	4003
Bead plane.	4004
Grooving plane, one pair.	4005
Plated Square.	4006
Eyelets' Closing Pliers, one pair.	4007
Shoe Punch, one pair.	4008
Shoe Pincers, one pair.	4009
C. S. Mason's Trowel.	4010
C. S. Plastering Trowels.	4011
Saw File.	4012
Saw File.	4013
Frame Saw File.	4014
Square bastard File.	4015
Flat bastard File.	4016

Hand bastard File.	4017
Round smooth File.	4018
Round File.	4019
Hand File.	4020
Round bastard File.	4021
Shoe rasp, single, improved.	4022
Hand bastard File.	4023
Flat 2nd Cut File.	4024
Round bastard File.	4025
Square bastard File.	4026
Horse rasp.	4027
Knife file, bastard.	4028
Hand file, bastard.	4029

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No. DVIII.

Shelf, carved, filled with glass stoppered bottles, for products of the Mineral Kingdom.

## BOARD CASE No. DIX.

Tools Racks, two, containing 15 Carpenter's tools.

4030 to 4044

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## WALL FRAMES Nos. DX. and DX bis.

Object Lesson Card. Mineral Kingdom. No. 5. Steel ; notes on the manufacture of steel and specimens of its products :—knife, pens, needle, and magnet. Oliver and Boyd. London.

4045

Object Lesson Card. Mineral Kingdom. No 6. Copper, Bronze, and Brass. Explanatory notes and specimens of ore, brass wire, pins, and Dutch metal. Oliver and Boyd, London.

4046

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## WALL FRAMES Nos. DXI. and DXI bis.

Cox and Co.'s Practical Object Lessons. English scissors. Specimens of Iron, Steel, etc., showing the several processes of manufactures of English scissors. London.

4047

Cox and Co.'s Practical Object Lessons. Glass and its manufacture, illustrated by specimens of materials in the several stages. London.

4048

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## WALL FRAME No. DXII.

Two of Constable's maps of India showing its Mineral products and Geological features.

4049

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## MINERAL KINGDOM.

DESK CASES ON BRASS BRACKETS ATTACHED TO THE  
GALLERY RAILS.

## DESK CASE No. DXIII.

*Collection of British Rocks.*

Peat.	4050
Raised Beach—Post Glacial, Post Tertiary. Isle of Portland.	4051
Glacial Rock. Cheshire. Eocene.	4052
Eocene Clay. Hordwell. Eocene.	4053
Eocene Clay. Hordwell. Eocene.	4054
Barton Clay. Upper Eocene. Tertiary. Hampshire.	4055
Barton Clay. Upper Eocene. Tertiary. Hampshire.	4056
London Clay rock. Eocene. Bognor.	4057
Alum Bay sand. Isle of Wight. Middle Eocene. Tertiary.	4058
Lignite. Lower Miocene. Tertiary. Bovey Tracey. Devon.	4059
Chalk, Weymouth. Cretaceous.	4060
Cretaceous Flint Nodule of the Upper Chalk. Dorset. Secondary.	4061

	369
Chalk Limestone. Ireland. Cretaceous.	4062
Altered Chalk, Metamorphic. Antrim. Ireland. Cretaceous.	4063
Upper Greensand. Weymouth. Cretaceous.	4064
Greensand. Weymouth. Cretaceous.	4065
Phosphatic Nodules (Coprolites), Secondary. Upper Green- sand. Cambridge. Cretaceous.	4066
Weald Clay. (F. Water). Lower Cretaceous. Secondary. Weymouth.	4067
Hastings Sand. Weymouth. Cretaceous. Secondary.	4068
Dirt Bed. (Mould of Fossil Forest) Fresh water. Port- land. Upper Oolite.	4069
Purbecks with Cyprides. Fresh water. Dorset. Upper Oolite.	4070
Purbecks. Fresh water. Portland. Upper Oolite.	4071
Purbeck marble. Secondary. Dorset. Upper Oolite.	4072
Laminated Sandy Limestone. Base of Purbeck. Lulworth. Upper Oolite.	4073
Coniferous wood. Upper Oolite. Dirt Bed. Island of Port- land.	4074

- Punfield bed. Swanage. Upper Oolite. Secondary. 4075
- Roach. Secondary. Upper bed of the Portland stone. Portland. Upper Oolite. 4076
- Portland stone. Portland. Upper Oolite. Secondary. 4077
- Kimeridge shale. Weymouth. Upper Oolite. Secondary. 4078
- Altered Kimeridge shale. Weymouth. Upper Oolite. 4079
- Kimeridge shale, white. Weymouth. Upper Oolite. 4080
- Lignite. Weymouth. Upper Oolite. 4081
- Coral Rag. (Coralline Oolite) Secondary. Weymouth. Middle Oolite. 4082
- Oxford (Clay) shale. Middle Oolite. Secondary. Weymouth. 4083
- Septaria (Turtle Stone) of the Oxford Clay. Secondary. Weymouth. Middle Oolite. 4084
- Cornbrash Limestone. Secondary. Weymouth. Lower Oolite. 4085
- Forest marble. Lower Oolite. Weymouth. 4086
- Great Oolite. Secondary. Lower Oolite. Gloucestershire. 4087

- Pea Grit of the Inferior Oolite. Lower Oolite. Gloucestershire. Secondary. 4088
- Roe stone of the Great Oolite. Secondary. Gloucestershire. Lower Oolite. 4089
- Tree stone. Gloucestershire. Lias. 4090
- Lower Liassic Sand. Leckhampton. Gloucestershire. Secondary. 4091
- Altered Lias, Metamorphic. Antrim. Ireland. Lias. 4092
- Limestone. Keinton. Somerset. Lower Lias. Secondary. 4093
- New Red marl (Keuper). Bristol. Upper Trias. Secondary. 4094
- Bone Bed. Bristol. Rhoetic. Upper Trias. Secondary. 4095
- Triassic marl, near Bristol. Secondary. 4096
- Triassic marl, near Bristol. Secondary. 4097
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Scotland.  
4209
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4210
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4211
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4212
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S. W. Primary. 4248

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### MINERAL KINGDOM.

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## MINERAL KINGDOM.

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- Ammonites Lautus*. Gault. Folkestone. 4421
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- Hamites, Folkestone. Cretaceous. Secondary. 4423
- Terebratula Obtusa*, var *biplicata*. Gault. Cambridge. 4424
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Hastings sands, Lower Cretaceous or Necomian Lulworth,  
near Weymouth. Secondary.

4428

Cypriis. Purbeck Limestone. (Fresh water) Ridgeway, near  
Weymouth.

4429

Cypridæ in situ. Upper Oolite. Purbeck. Weymouth.

4430

Coniferus Wood. Upper Oolite. Dirt Bed. Island of  
Portland.

4431

Roach. Upper bed of the Portland stone. Secondary.

4432

Trigonia Incurva. Upper Oolite. Portland stone. Island  
of Portland.

4433

Bituminous shale (Kimmeridge Series). Upper Oolite.  
Weymouth. Secondary.

4434

Rhynchonella Inconstans. Terebratula inconstans. sow.  
m. c. Kimmeridge clay. Weymouth.

4435

Pleurotomaria Reticulata. Kimmeridge clay. Weymouth.  
Dorset.

4436

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### DESK CASE No. DXIX.

Ostrea Deltoidea. Kimmeridge clay. Weymouth. Dorset.

4437

Cypris. Purbeck Limestone. (Fresh water) Ridgeway,  
near Weymouth.

4438

Coral Rag. Coralline Oolite, Middle Oolite. Weymouth.  
Secondary.

4439

Hemicidaris Intermedia, Cidaris papillata, Park O. R. vol. III,  
t. 1, Coral Rag. Calne. Wiltshire.

4440

The casmilia trichotoma Wertunburg. Middle Oolite.

4441

Trigonia Clavellata. Weymouth. Middle Oolite.

4442

Oxford (Clay) shale. Weymouth. Middle Oolite. Se-  
condary.

4443

Trigonia Clavellata. Coral Rag. Weymouth. Dorset.

4444

Belemnites Obsoletus. Oxford clay. Moscow.

4445

Rhynchonella Aptycha (D'Orbigny) (Like R. Acuta of sow-  
erby) Oxford clay. Near Moscow.

4446

Rhynchonella Concinna (sow sp.) Terebratula rostrata,  
flabellula, pinguis, subtetrahedra. Cornbrash. Weymouth.  
Dorset.

4447

Terebratula obovata. Cornbrash. Weymouth. Dorset.

4448

Forest marble. Weymouth. Lower Oolite.

4449

*Terebratula Digona*. Forest marble. Weymouth. Dorset.  
4450

*Avicula Echinata*. Cornbrash. Weymouth. Dorset.  
4451

*Acrosalinia himicardaroides*. Wiltshire. Lower Oolite.  
4452

*Ancyloceras Callovicense*. Kelloway Rock (Middle Oolite)  
Chippenham, Wiltshire.  
4453

*Ostrea Acuminata*. Great Oolite. Fuller's Earth. Wey-  
mouth.  
4454

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4455

Pea Grit of the inferior Oolite. Lower Oolite. Gloucester-  
shire. Secondary.  
4456

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4457

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4458

Inferior Oolite of the Lower Oolite. Bath. Secondary.  
4459

*Ammonites Concavus*. Dorset. Lower Oolite.  
4460

*Pholadomya fidicula*, Wiltshire. Lower Oolite.  
4461

*Ammonites Concavus*. Inferior Oolite, Bridport. Dorset.  
4462

*Terebratula finbria*, Yeovil. Lower Oolite. 4463

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*Holcotypus Hemisphericus*, Desor. Inferior Oolite, Yeovil. 4467

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Buck. Inferior Oolite, Gloucestershire. 4468

Limestone of the Lower Lias, Keinton, Somerset. Secondary. 4469

Altered Lias. Antrim. Ireland. Metamorphic. 4470

*Gryphaca Incurva*. Blue Lias, Lyme Regis, Dorset. 4471

*Ammonites Planicosta*. *Ammalculatus*. Blue Lias, Lyme  
Regis. Dorset. 4472

*Ammonites Obtusus*. Blue Lias Limestone, Lyme Regis,  
Dorset. 4473

*Extracrinus Briareus*. *Pentacrinus Briareus*, Miller, Blue  
Lias, Lyme Regis. Dorset. 4474

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- White Lias. Upper Trias. Axmouth. Devon. Secondary. 4480
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- Gypsum of the new Red Sandstone. Trier. Secondary. 4482
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- Ammonites Studeri*, Hallstadt. Trias. Secondary. 4484
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4490
- Magnesian Limestone, Yorkshire (stone of the York Minster and Houses of Parliament) Permian. Primary.  
4491
- Productus Horridus* in situ—Thuringia.  
4492
- Fenestella retiformis*. Thuringia.  
4493
- Permian Rock of Riga. Riga.  
4494
- Cannel coal. From the Coal Measures. S. Wales. Upper Carboniferous.  
4495
- Upper Millstone grit. Bristol. Upper Carboniferous. Primary.  
4496
- Upper Millstone grit, below Coal Measures. Durham.  
4497
- Coal Plant. Scarbruck.  
4498
- Anthracosia acuta*. Yorkshire.  
4499
- Mountain limestone with shells and ennerinites of Derbyshire. Carboniferous. Primary.  
4500
- Mountain limestone. Bristol. Carboniferous. Primary.  
4501
- Lousdalia floriformis*. Bristol.  
4502
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4503

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<i>Enomphalus Pentangulatus.</i> Ireland.	4504
<i>Enomphalus Dionysii.</i> Belgium	4505
<i>Productus Costatus.</i> Yorkshire.	4506
<i>Productus Martini.</i> Carboniferous Limestone. Yorkshire.	4507
<i>Spirifer Glaber.</i> Yorkshire.	4508
<i>Calciola Sandalina.</i> Devonian. Eifel.	4509
<i>Spirifera Reticularis.</i> Eifel.	4510
<i>Goniotites Retrorsus.</i> Eifel.	4511
<i>Murchisonia Bilineata.</i> Eifel.	4512
Old Red Sandstone. Devonian. Fish Boulders. Scotland. Primary.	4513
Old Red Sandstone. Middle Devonian. Paving stone of Caithness. Primary.	4514
Devonian Shale. Middle Devon.	4515
Upper Silurian of Bohimia. Prague. Silurian. Primary.	4516
Corals, shells and Trilobite remains. Upper Silurian. Dudley.	4517

Rhynchonella Llandoveriana. Ireland.	4518
Cardiola Interrupta. Bohemia.	4519
Natica Gregaria. Bohemia.	4520
Orthis Biloba. Gothland.	4521
Terebratula thetis. Bohemia.	4522
Graptolites. Bohemia.	4523
Calymene Blumenbachie. Dudley.	4524
Atrypa Reticularis. Dudley.	4525
Pentamerus Galeatus. Dudley.	4526

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# DESK CASE No. DXX.

Lingula Flags. St. David's. S. Wales. Upper Cambrian. Primary.	4527
Cambrian rock. Oban. N. B. Primary.	4528
Oldhamia Antiqua. Ireland.	4529
Cambrian Slate. N. Wales.	4530
Pebidian. St. David's. S. Wales.	4531

	403
Dimetian. S. Wales.	4532
Laurentian, oldest known Rock. Canada.	3533
Lava, porous, Volcanic, near Bonn.	4534
Lava tuff, Volcanic tuff. Eifel. Rhine.	4535
Trachyte, Volcanic. Drachenfels.	4536
Trachyte with Felspar. Volcanic. Drachenfels.	4537
Basalt, Volcanic. From Giant's Causeway, Ireland.	4538
Basalt, Volcanic. Ireland.	4539
Pitchstone, Volcanic. Saxony.	4540
Amygdaloid rock, Volcanic. Oberstein.	4541
Porphyry containing Tourmaline and Felspar. Volcanic. Cornwall.	4542
Granite. Saxony. Plutonic.	4543
Granite. Guernsey. Plutonic.	4544
Porphyritic Granite. Cornwall.	4545
Syenitic Granite. Plutonic. Leicester.	4546

Red Gneiss. Freiberg.	4547
Serpentine. Penzanæ.	4548
Diorite or Greenstone, Volcanic. S. Wales.	4549
Gneiss. Plutonic. Var. Saxony.	4550
Kaolin Rock. Cornwall.	4551
Grecian marble, near Athens. Metamorphic.	4552
Anthracite. Glance Coal. France. Metamorphic.	4553
Emerald in the matrix (?)	4554
Wolfram.	4555
Variegated or Purple Copper.	4556
Pyrophyllite.	4557
Kupferl azar. Copper ore.	4558
Stilbite.	4559
Native Bismuth.	4560
Arsenical Iron.	4561

	405
Rothzinkorz. Red Zinc ore.	
	4562
Banded Jasper.	
	4563
Sulphuret of Zinc, Soda, and Garnet Blende.	
	4564
Small pieces of specimens of Minerals.	
	4565
Phosphate of Uranium.	
	4566
Nine tubes containing specimens of Minerals.	
	4567-75
Pebble (?)	
	4576
Eight Card cases containing specimens of Minerals.	
	4577-84
Malachite from Russia (two specimens).	
	4585-6
Collection of Emeralds in the matrix from different countries (thirteen specimens).	
	4587-99
Collection of imitation Precious Stones from Kashmir. 38 specimens.	
	4600-37

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### BRACKET SHOW CASE No. DXXI.

Sixteen specimens of Silver ore. Presented by an Australian gentleman on 22nd January, 1890, through Mr. I. O'Callaghan.

4638-53

Specimen Gold Quartz. M. Morgan, Queensland. 8 oz. gold to 1 ton. Quartz, (value of mine 8 millions). Paip 1,000,000 shilling monthdir.

Iodide of Silver and Manganese. Central Broken Hill.  
S. M. Coy., N. S. W. Australia.

Tin from Farley's Creek. Northern Territory, Australia.

Galena. 20 oz. Silver, 40 oz. Lead. Broken Hill Junction.  
S. M. Coy.

Copper ore. Grey Oxide ore. New North Broken Hill.  
S. M. Coy.

Carbonate Lead and native Silver. North.

Piece of Lead. Presented by O'Callaghan, Esqr.

Carbonate of Lead and Silver. Broken Hill Junction.  
S. M. Coy., N. S. W. Australia.

Iron stone and Chloride.

Galena.

Manganese, Chloride of Silver and Iodide. Central Broken  
Hill. S. M. Coy.

Native Silver 90 oz. no Lead. Central Broken Hill. S. M.  
Coy.

Antimonial Silver and Lead ore. 95 oz. Silver. 15 oz.  
Lead. South Broken Hill. S. M. Coy.

Copper and Chloride Silver. North Broken Hill. S. M.  
Coy.

40 oz. Silver	}	South Broken Hill. S. M. Coy.
23 oz. Copper		
10 gr. Lead		



## DESK CASE No. DXXII.

*Scale of hardness used by mineralogists to determine  
the comparative hardness of minerals.*

## Breihaupt's Scale.

1. Talc.	4654
2. Gypsum.	4655
3. Mica.	4656
4. Calcite.	4657
5. Flour spar.	4658
6. Apatite.	4659
7. Hornblende.	4660
8. Feldspar.	4661
9. Quartz.	4662
10. Topaz.	4663
11. Corundum.	4664
12. Diamond.	4665

*Scale of Fusibility after Von Kobell.*

1. Grey Antimony.	4666
2. Natrolite.	4667
3. Garnet.	4668
4. Amphibole.	4669
5. Feldspar.	4670
6. Bronzite (Silicate of Magnesia and Protoxide of Iron).	4671

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*Apparatus for Testing the Quality of Gold.*

Three glass stoppered phials containing some chemical, a touch-stone, and one other article.

4672-6

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Mr. R. Damon's Collection of 28 of the most celebrated white and coloured diamonds, wrought in crystal glass of great lustre. They are the fac-similes of the original in the south Kensington Museum.

1. Mattam, 367 carats.	4677
2. Great Mogul, 272½ carats.	4678
3. Koh-i-Noor, "Hill of Lustre." 186 carats before cutting.	4679
4. Koh-i-noor, 103¾ carats after cutting.	4680
5. Pigott, 82¼ carats.	4681

	409
6. Eugenie, 51 carats.	4682
7. Regent or Pitt, $136\frac{3}{4}$ carats.	4683
8. Star of the South, 125 carats	4684
9. Orlow ( Orloff ), $194\frac{1}{4}$ carats.	4685
10. Nassuk, $78\frac{1}{2}$ carats.	4686
11. Shah, 86 carats.	4687
12. Polar Star, $40\frac{1}{4}$ carats.	4688
13. Pasha of Egypt, 40 carats.	4689
14. Cumberland, 32 carats.	4690
15. Daria-i-Nur.	4691
16. Koh-i-Nur.	4692
17. Indian Table Stone.	4693
18. Indian Irregular Diamond, $112\frac{3}{4}$ carats.	4694
19. Indian Great Drop, $94\frac{1}{4}$ carats.	4695
20. Sancy.	4696

21. Yellow Florentine, $139\frac{1}{2}$ carats.	4697
22. Green Diamond of Dresden, $48\frac{1}{2}$ carats.	4698
23. Hope. Blue Diamond, $44\frac{1}{2}$ carats.	4699
24. Red Russian, 10 carats.	4700
25. Mr. Dresden's Diamond, $76\frac{1}{2}$ carats.	4701
26. Round Ruby.	4702
27. Ruby drop.	4703
28. Oriental Topaz, $157\frac{3}{4}$ carats.	4704

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*Imitations of Precious Stones.*

Diamond (thirteen specimens).	4705-17
Ruby (two specimens).	4718-9
Sapphire (two specimens).	4720-1
Chrysoberyl.	4722
Spinel ruby.	4723
Balas ruby.	4724

	411
Zirkon, two specimens.	4725-6
Hyacinth.	4727
Beryl.	4728
Emerald.	4729
Aqua Marine.	4730
Noble Opal.	4731
Topaz ( four specimens ).	4732-5
Weintopas.	4736
Hessonit.	4737
Iron Garnet. Almandine. Three specimens.	4738-40
Vermeille.	4741
Garnet.	4742
Bohmischer Granat.	4743
Turmalin.	4744
Rubellit.	4745

Dichroite or Iolite.	4746
Olivine.	4747
Chrysolite.	4748
Cyanite.	4749
Turquoise.	4750
Adularia or Moonstone	4751
Green Aventurine. Amazon stone.	4752
Moldavit.	4753
Volcanic glass (two specimens).	4754-5
Jade.	4756
Bergkrystal.	4757
Citrine.	4758
Amethyst (two specimens).	4759-60
Spanischer topaz (two specimens).	4761-2
Chalcedony.	4763

	413
Carnelian.	4764
Carneolonyx.	4765
Sardonyx.	4766
Onyx.	4767
Avanturine.	4768
Chrysoprase.	4769
Jasper (three specimens).	4770-2
Bloodstone. Heliotrope.	4773
Azure stone.	4774
Malachite.	4775
Amber.	4776
Jet.	4777
Fossil Turquoise. Odontolite.	4778
Pearl, white.	4779
Pearl, black.	4780



Coral.

4781

Collection of colours, used in Jeypore in enamelling gold.

4782

Pure Carbonate of Lime.

4783

Limestone.

4784

Crystallized Limestone.

4785

Felspar from Rutlam. Presented by Chhotey Lal.

4786

Asbestos from Rutlam. Presented by Chhotey Lal, Draftsman, 28th March, 1893.

4787

Agate with water inside.

4788

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### BRACKET CASE No. DXXIII.

Cambay Stones. Cambay is the Oberstein of India, but the stone can be cut and prepared at a cheaper rate in Oberstein.

4789

Collection of Cambay stones, comprising 5 Jasper, 6 Agate, 8 Jade and 1 Lapislazuli pieces, and also a crystal thumb-ring, &c.

4790

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### BRACKET CASE No. DXXIV.

Collection of Agates (41 pieces) from Oberstein in Germany, Austrian Tyrol. On the Nahe river in Oldenberg

detached territory. The Nahe enters the Rhine at Bingen. Here Agates are obtained and stained with different colours. Large numbers of these stones are sent to India. Especially Onyx beads.

Agate is a composite substance, an association of certain siliceous or quartz like minerals. Agates forming minerals are chiefly Chalcedony, Carnelian, Jasper, Quartz, and Amethyst. Two or more of these forming a variegated stone, and usually presenting a diversity of spots and stripes, may be denominated an Agate.

4791-4830

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### DESK CASE No. DXXV.

Four Building stones from Jhalrapatan.

4831-4

Marble from Baroda. Presented by Col. S. S. Jacob, C.I.E.,  
Superintending Engineer, Jeypore, 28th March, 1893.

4835

Sang Ajauba. Quarry, Sabalgarh in Gwalior, 60 miles from  
Kerowlee.

4836

Building stone from Ralset.

4837

Marble from Baroda. Presented by Col. S. S. Jacob, C.I.E.,  
Superintending Engineer, Jeypore, 28th March, 1893.

4838

Granite, from Mandeni on Neemuch Road.

4839

Building stone. Ulwar.

4840

Building stone. Ulwar.

4841

Cream coloured marble from Ulwar.	4842
Black stone. Mandla Kalan. Largely used for building purposes. Looks very beautiful when polished. Ulwar State.	4843
Building stone. Ulwar.	4844
Building stone. Ulwar. (Malakhera).	4845
Building stone. Bhim ka Toda quarry. Ulwar State.	4846
Slate from Ulwar.	4847
Building stone from Ulwar.	4848
Stone, Ramgarh Tehsil, 18 miles from Ulwar.	4849
Building stone from Ulwar. Alapur quarry.	4850
Ajera ka Slate. Ulwar State.	4851
Pink marble from Ulwar State. Quarry near Bandikui, R. M. Ry. Station.	4852
Building stone. Ulwar.	4853
Building stone from Ulwar.	4854
Building stone from Ulwar.	4855

	417
Slate from Ulwar.	4856
Roofing slab. Ulwar.	4857
Doroli stone. Ulwar State.	4858
Building stone from Ulwar.	4859
Slate from Ulwar.	4860
Roofing slab. Ulwar.	4861
Building stone from Ulwar. Berla quarry.	4862
Chhowdala. Ulwar State.	4863
Slate from Ulwar.	4864
White marble with green streaks, Jaman ki Chowki. Quarried near Jamun ki Chowki, about 9 miles to the south-west of Ajmere.	4865
White marble, Parbatpura, Quarried near Parbatpura, about $5\frac{1}{2}$ miles to the south of Ajmere. This can be had in all sizes, suited to building purposes.	4866
Black marble, Khajur ki Chouki. Quarried near Khajur ki Chouki, at the end of the 7th mile stone of the Ajmere Naserabad Road.	4867
Pink marble. Kampura or Kayampura. Quarried near Kayampura, 14 miles to the north-east of Ajmere.	4868

White marble. Kampura or Kayampura. Quarried near  
Kayampura, 14 miles to the north-east of Ajmere.

4869

Bassi marble, green. Quarried near Bassi, 12 miles to the  
north of Ajmere.

4870

Bassi marble, green. Quarried near Bassi, 12 miles to the  
north of Ajmere.

4871

Bassi marble, green. Quarried near Bassi, 12 miles to the  
north of Ajmere.

4872

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### DESK CASE No. DXXVI.

#### *Building Stones, Jeypore ( Rajputana ).*

Sandstone from Jhiri hills. Jeypore.

4873

Black stone from Bhainslana, Jeypore.

4874

Green stone. Raiwala. Jeypore.

4875

Red sandstone from Kerowlee.

4876

Bansi white stone. Kotri.

4877

Danaoo stone. Jeypore.

4878

White marble. Raiwala. Jeypore.

4879

White marble. Raiwala. Jeypore.

4880

Roofing slab. Bhankri. Jeypore.	4881
Marble (bluish). Barkara quarry. Raiwala. Jeypore.	4882
Marble. White quality. Raiwala. Jeypore.	4883
Amargarh stone. Quality II. Jeypore.	4884
Amargarh stone. Jeypore.	4885
Pink marble from Baldeogarh.	4886
Pink marble from Raiwala.	4887
White marble. Makrana.	4888
White marble. Jhiri. Jeypore.	4889
Rahori stone.	4890
Roofing slab. Bhankri. Jeypore.	4891
Jhalana stone. Jeypore.	4892
Roofing slab. Amber. Jeypore.	4893
Roofing slab. Amber. Jeypore.	4894
Roofing slab. Amber. Jeypore.	4895

Kheemuch stone. Sawai Madhopore, Jeypore.	4896
Red stone from Kotri.	4897
Red stone from Kotri.	4898
Roofing slab. Bhankri, Jeypore.	4899
Roofing slab. Bhankri, Jeypore.	4900
Red marble. Khetri, Jeypore.	4901
Black stone. Katar-ki-Dungri, Baswa, Jeypore.	4902
White marble from Bassi, Jeypore.	4903
Cream coloured marble from Rani-ki-khan. Raiwala, Jeypore.	4904
Sandstones from Jhirni hills.	4905
Marble, white, from Jhiri, Jeypore.	4906
Sang-i-zarahat, Raiwala quarry, Jeypore.	4907
Red stone, Sawai Madhopore, Jeypore.	4908
Roofing slab, Bhankri, Jeypore.	4909



	421
Roofing slab, Baswa, Jeypore.	4910
Gajmittee.	4911
Gajmittee. Nagore.	4912
Raiwala Pink marble, Jeypore.	4913
Black marble from Bhainslana.	4914
Makrana marble, Jodhpore.	4915
Kangachi marble from Pertapgarh quarry.	4916
Dark-blue white marble from Raiwala, Jeypore.	4917
White marble, Raiwala, 32 miles from Jeypore.	4918

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*Building Stones, Oodeypore.*

Pink marble from Devimata Hill quarry. Oodeypore, Meywar.	4919
Marble from Rajnagarh. Oodeypore.	4920
Dolerite. Oodeypore.	4921
Black marble from Chittor, Oodeypore.	4922
Millstone from Dhunkly, Oodeypore.	4923

Serpentine from Rakhub Dev, Oodeypore.	4924
Basalt from Mutat, Oodeypore.	4925
Gneiss from Badia Bao, near	4926
Dolerite. Oodeypore, Meywar.	4927
Slate from Dhunkly, Oodeypore.	4928
Dolerite from Oodeypore, Meywar.	4929
Dolerite from Dhar, near Oodeypore.	4930
Building Stone. Oodeypore.	4931
Building Stone. Oodeypore.	4932
Marble. Oodeypore.	4933
Building Stone. Oodeypore.	4934
Gneiss from Dheber Band, Oodeypore.	4935

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*Small gun-metal Frames, attached to the Pillars  
on the Desk Cases.*

PILLAR FRAMES No. DXXVII.

## PILLAR FRAMES No. DXXVIII.

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PILLAR FRAMES No. DXXIX.

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PILLAR FRAMES Nos. DXXX-DXXXII.

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*Illustrated Plates from Dr. A. Kenngott's Mineralogy  
presented by D. V. Goldschmidt, Heidelberg.*

Plate 1. Planes of Crystals and separate Crystalline Forms.  
4936

Plate 2. Modifications of Crystalline planes, Combinations, axes of crystals, and their optical phenomena.  
4937

Plate 3 and 4. Descriptions of the above.  
4738-9

Plate 5. The Precious Stones.  
4940

Plate 6. The Precious Stones (contd.)  
4941

## PILLAR FRAMES No. DXXXI.

Plate 7. Quartz.	4942
Plate 8. Quartz and Opal.	4943
Plate 9. Kyanite, Staurolite, Andalusite, &c.	4944
Plate 10. Felspathic Minerals and Rocks, Micaceous Minerals and Granite.	4945
Plate 11. Zeolitic Minerals and Carbonaceous Limestone.	4946
Plate 12. Marbles.	4947
Plate 13. Carbonate of Lime. Marble.	4948
Plate 14. Aragonite, Gypsum, Anhydrite, Apatite, and Flourspar.	4949
Plate 15. Flourspar, Baryta Compounds, Strontia, Salts of Potash, Salts of Soda and Borate of Magnesia.	4950
Plate 16. Sulphur, Honey-stone, Graphite, Coal, and Lignite.	4951

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PILLER FRAME No. DXXXII.

Plate 17. Gold, Platinum, and Iridium.	4952
Plate 18. Native silver, Antimonial silver, Sulphuret of silver, Glance and Red silver ore.	4953

Plate 19. Mercury, Copper ore, Native ore, and Sulphuret of copper.

4954

Plate 20. Red copper, Blue copper, Malachite, Phosphates of copper, Silicate of copper, Arseniates of copper, and Sulphate of copper.

4955

Plate 21. Nickel ores, Cobalt ores, and Iron.

4956

Plate 22. Magnetic Pyrites, Pyrites, Spear Pyrites, Magnetic Iron, Iron glance, and Brown Iron ores.

4957

Plate 23. Brown Iron stone and other ores of Iron, and Hausmannite or Manganese ore.

4958

Plate 24. Galena, White Lead ore, Anglesite, Pyromorphite, Lead, Tin, and Zinc ores.

4959

Plate 25. Bismuth, Uranium, Titanium, Tantalum, and Wolfram ores.

4960

Plate 26. Molybdenum, Chrome, Antimony, and Arsenic ores.

4961

PILLAR FRAMES No. DXXXIV.

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PILLAR FRAMES No. DXXXV.

---

PILLAR FRAMES No. DXXXVI.

---

PILLAR FRAMES No. DXXXVII.

---

PILLAR FRAMES No. DXXXVIII.

## No. DXXXIX.

Shelf, carved, filled with small tin cases containing Mineral products.

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## No. DXL.

Shelf, carved, filled with small tin cases containing Mineral products.

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## No. DXLI.

Shelf, carved, filled with small tin cases and glass stoppered phials to contain products from the Mineral Kingdom.

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## No. DXLII.

Shelf, carved, filled with tin boxes containing Mineral products.

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## WALL FRAME No. DXLIII.

Natural History Chart. Crystallography and Mineralogy.  
No. 165. Bouasse Lebel. Paris.

4962

## No. DXLIV.

Copy of wall-painting. Cave No. 9. Ajanta.

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4963

## WALL FRAME No. DXLV.

Map showing the geological structure of the globe according to Ami Bone.

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4964



## WALL FRAME No. DXLVI.

Natural History Chart. Fossils. No. 164. Bouasse Lebel.  
Paris.

4965

## No. DXLVII.

Copy of a wall-painting. Cave No. 10. Ajanta.

4966

## WALL FRAME No. DXLVIII.

Chart illustrating the monuments, arms, and instruments belonging to the pre-historic period (Stone Age). No. 148.  
Bouasse Lebel. Paris.

4967

## WALL FRAME No. DXLIX.

Chart illustrating the arms and other objects belonging to the age of Bronze. No. 149. Bouasse Lebel. Paris.

4968

## WALL FRAME No. DL.

Chart illustrating the tabular view of characteristic British Fossils stratigraphically arranged.

4969

## No. DLI to DLIV.

Shelves, carved, filled with small tin cases containing products from the Mineral Kingdom.

## WALL FRAME No. DLV.

Mineralogical Chart illustrating the diamonds and precious stones. Bouasse Lebel. Paris.

4970

## No. DLVI.

Copy of a wall-painting, Cave No. 9, Ajanta.

4971

## No. DLVII.

Copy of a wall-painting, Cave No 9, Ajanta.

4972

## WALL FRAME No. DLVIII.

Process of making a combination Pocket-knife by Slater Brothers. Sheffield.

4973

## WALL FRAMES No. DLIX.

A. Cox and Co.'s Practical Object Lessons. Series 15. Cutlery—Table knives and how they are made, with specimens of iron, steel, bone, showing the various processes in the making of English knives. London.

4974

B. Cox and Co.'s Practical Object Lessons. Series 16. Cutlery—Pocket knives and how they are made, with specimens of iron, steel, horn, &c., showing the several processes of manufactures of English Pocket knives. London.

4975

## WALL FRAME No. DLX.

Geological Chart, illustrating the most remarkable specimens of marble. No. 158. Bouasse Lebel. Paris.

4976

## WALL FRAME No. DLXI.

Cox and Co.'s Practical Object Lessons. Series I. Needle-making with specimens of wire used in the manufacture and showing the various processes in the art of needle-making. London.

4977

## WALL FRAME No. DLXII.

Kirby, Beard and Company's two cards, illustrating with specimens the various processes employed in the manufacture of pins, needles, hair-pins, and safety-pins.

4978

## WALL FRAME No. DLXIII.

Wall Frame showing the process in the manufacture of W. Mitchell's celebrated steel pens.

4979

## WALL FRAME No. DLXIV.

Specimens illustrating the various processes employed in the manufacture of Cash-bowl, oil-can, file, hammer, saw, and bush plate, by J. C. and W. Lord, Birmingham.

4980

## WALL FRAME No. DLXV.

The Colours, shown by square shaped designs on a card by Emile Deyrolle of Paris.

4981

## WALL FRAME No. DLXVI.

Colour Chart, illustrating the Primary, Secondary, and Tertiary colours in circular diagrams, by Messrs. George Phillip and Son, England.

4982

## WALL FRAME No. DLXVII.

Astronomical Map. Solar system.

4983

## WALL FRAME No. DLXVIII.

Astronomical Map. Equatorial stars. Autumn.

4984

## WALL FRAME No. DLXIX.

Astronomical Map. Equatorial stars. Spring.

4985

## WALL FRAME No. DLXX.

Astronomical Map. North Polar stars.

4986

## WALL FRAME No. DLXXI.

Astronomical Map. South Polar stars.

4987

## WALL FRAME No. DLXXII.

Map of India, showing "Land Surface Elevation." Cons-  
table's Hand Atlas of India, No. 3.

4988

Map of India, showing "Land Surface Features." Constable's Hand Atlas of India, No. 4.

4989

### WALL FRAME No. DLXXIII.

General Political map of the Indian Empire. Constable's Hand Atlas of India, Series No. 15.

4990

Military map of the Indian Empire, Constable's Hand Atlas, No. 16.

4991

### WALL FRAME No. DLXXIV.

Routes to India. Constable's Hand Atlas of India, Series No. 1.

Indian Ocean, showing the ocean currents in the monsoons, depths, and the tides. Constable's Hand Atlas of India, Series No. 2.

4992

### WALL FRAME No. DLXXV.

Relief map of the Eastern Hemisphere by George Phillip and Son. London.

4993

### WALL FRAME No. DLXXVI.

A chronological and historical Chart of India, compiled and drawn by Arthur Allen Durnall, of the High Court of Justice, Calcutta.

4994

### WALL FRAME No. DLXXVII.

Archæology explained and illustrated by means of diagrams in colours. No. 38. Bouasse Lebel, Paris.

4995

## WALL FRAME No. DLXXVIII.

Heraldry. Explained and illustrated by means of diagrams  
in colours. No. 80. Bouasse Lebel, Paris.

4996

## WALL FRAME No. DLXXIX.

Prevailing Races. Constable's Hand Atlas of India, Series  
No. 9.

4997

## WALL FRAME No. DXXX.

Density of Population of the Indian Empire. Constable's  
Hand Atlas of India, Series No. 8.

4998

## WALL FRAME No. DLXXXI.

Chart of the Indian Ocean, Test. T. Ruddiman Johnston,  
F.R.G.S. Class Lesson Series No. 66.

4999

## WALL FRAME No. DLXXXII.

Chart of the Scale of Nations, showing the sizes, areas,  
populations, exports and imports, revenues and national  
debts of the leading countries and kingdoms. Compiled  
1881. Published by W. H. Guest.

5000

## WALL FRAME No. DLXXXIII.

Chart of the Indian Ocean. T. R. Johnston, F.R.G.S.  
Class Lesson Series No. 65,

5001

## WALL FRAME No. DLXXXIV.

Map illustrating the Distribution of the principal Religions of India and British Burmah. Compiled from the Census of 1881 by Major C. Strahan, R. E., Survey of India Department.

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## WALL FRAME No. DLXXXV.

The Meteorology of India and Ceylon illustrated by a map. Class Lesson Series No. 67. T. R. Johnston & Co., London.

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## WALL FRAME No. DLXXXVI.

Optics. Explained and illustrated by means of diagrams in colours. Bouasse Lebel, Paris. No. 101.

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Map of India showing the chief Railways and Canals. Class Lesson Series No. 64. R. Johnston & Co., London and Edinburgh.

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## WALL FRAME No. DLXXXVIII.

Elementary Relief Map of England and Wales by G. W. Bacon, F.R.G.S. Published by George Phillip & Son.

5006

## WALL FRAME No. DLXXXIX.

Map of India, illustrating its Industry, Agriculture, and Minerals. Class Lesson Series No. 63. T. Ruddiman Johnston, F.R.G.S.

5007



## WALL FRAME No. DXC.

Relief Map of India and Ceylon by Henry F. Brion. Pub-  
lished by George Phillip & Son.

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## WALL FRAME No. DXCI.

Map of India, showing the Density of Population. Class  
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Relief Map of North America. Messrs. George Phillip and  
Son, Edinburgh and London.

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## WALL FRAME No. DXCIII.

Test. India and Ceylon. Illustrated by a map. Class Les-  
son Series No. 61. T. Ruddiman Johnston, F.R.G.S.

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## WALL FRAME No. DXCIV.

Relief Map of South America. George Phillip & Son,  
London.

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## WALL FRAME No. DXCV.

Political Map of India and Ceylon. Class Lesson Series  
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and London.

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## WALL FRAME No. DXCVII.

Map of India, showing its political divisions into Provinces  
and Feudatory States. Class Lesson Series No. 59. T.  
Ruddiman Johnston, F.R.G.S.

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## WALL FRAME No. DXCVIII.

Relief Map of Asia. George Phillip & Son, Edinburgh and  
London.

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## WALL FRAME No. DXCIX.

Physical Map of India and Ceylon. Class Lesson Series  
No. 58. T. Ruddiman Johnston.

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## WALL FRAME No. DC.

Relief Map of Africa. George Phillip & Son, Edinburgh  
and London.

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## WALL FRAME No. DCI.

Map of India, showing the Coast Line and chief Rivers. Class  
Lesson Series No. 57. T. Ruddiman Johnston, F.R.G.S.

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Relief Map of Europe. George Phillip & Son, Edinburgh  
and London.

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## WALL FRAME No. DCIII.

Railways, Telegraphs, and Navigable Canals. Section 3.  
Constable's Hand Atlas of India, Series No. 20.

5021

## WALL FRAME No. DCIV.

Railways, Telegraphs and Navigable Canals. Section 2.  
Constable's Hand Atlas of India, Series No. 19.

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## WALL FRAME No. DCV.

Relief Map of the Western Hemisphere. George Phillip and  
Son, Edinburgh and London.

5023

## WALL FRAME No. DCVI.

General Railway Map of India. Constable's Hand Atlas of  
India, Series No. 17.

5024

Map of India. Railways, Telegraphs, and Navigable Canals.  
Section 1. Constable's Hand Atlas of India, Series  
No. 18.

## WALL FRAME No. DCVII.

Map of the Nile, embracing the Soudan, Abyssinia, Red  
Sea, and Western Arabia by Lett.

5025

## WALL FRAME No. DCVIII.

Map showing the principal River Basins of India, prepared for the Calcutta International Exhibition of 1883 by the Survey of India Office.

5026

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WALL FRAME No. DCIX.

Map, showing the Distribution of Languages in India. Prepared for the Calcutta International Exhibition of 1883 by the Government of India.

5027

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WALL FRAME No. DCX.

Languages in India, shown by a map of the country. No. 10. Constable's Hand Atlas of India.

5028

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WALL FRAME No. DCXI.

Christian Mission Stations of the Indian Empire. No. 11. Constable's Hand Atlas of India.

5029

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No. DCXII.

5030

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No. DCXIII.

5031

## SHOW CASE No. DCXIV.

*Models in Clay, illustrative of the Amusements  
and Vices of men.*

- A Maharatta woman playing on a guitar. 5032
- A dancing girl with a drum or Báyán and man playing a guitar. 5033
- Two dancing girls, singing, attended by two fiddle players and a drummer. 5034
- Two dancing girls, sitting, one holding betel in her hand and the other a flower. 5035
- Two men, taking together tobacco, mixed with lime. 5036
- Judicial execution of a Thug or other criminal by hanging (capital punishment under the British rule). 5037
- Woman, under threats, giving up all her jewellery to save her husband from being murdered by highway robbers. 5038
- Judicial execution by Impalement (a native Indian mode of capital punishment, common under Moghul Rule) 5039
- A group of three men gambling with seven *cowris* which are thrown on the sole of a shoe, the winner has a number of coins by his side. 5040
- An assembly of men drinking opium dissolved in water. 5041
- An assembly of men preparing solution of the poppy for drinking. 5042

A Nautch-girl playing at cards with a friend. 5043

Model of a devotee of Bacchus ( God of Wine ), to illustrate the evil and pernicious effects of the excessive use of wine with a view to warn other people against it. 5044

Indian Hemp-smoker's shop. 5045

Dancing girl, learning how to dance and sing before a lyre-player or *Kalawat*, and accompanied in the tunes by a fiddle-player and drummer or *Tabalchi*. 5045 bis.

Native liquor house. 5046

Group to illustrate opium smoking. 5047

A man powdering hemp for drinking with mortar and pestle. 5048

A man powdering hemp on a slab with a muller. 5049

A man dissolving opium in a cup of water for drinking purposes. 5050

## PILLAR FRAME No. DCXV.

A set of Oleographs published by Hoeltz of Vienna to illustrate the great natural phenomena of the world as well as the great works of men on the globe.

The Shoshone Canons and Waterfalls, North America. 5051

The Gulf of Pozzuoli, with the Bay of Baiæ and Cape Miseno. 5052

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The Bernese Oberland.	5054
The Bernese Oberland ( Upper land ) in Switzerland.	5055
Otukupnarangi Hot Spring with the Silica Terrace, Roto- mahana, N. Z.	5056
Sierra Nevada, California,—with the Yosemite Valley.	5057
The plateau of Anahuac, Barranca Sta. Maria and the Peak of Orizaba.	5058
Naples with Vesuvius.	5059
Pasterzen Glacier with the Gross Glockner, Tyrol.	5060
The Nile Cataract, near Assouan.	5061
The Pillar Cape, Crown Prince Rudolph Land.	5062
Heligoland.	5063
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Nangasaki Harbour.	5065
The Adelsberg Grotto.	5066
The Weckelsdorf Crags.	5067



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Mangrove Coast in Venezuela.	5069
Hammerfest, Norway.	5070
Table Mountain and Cape Town.	5071
Giant's Causeway, Ireland.	5072
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Palmyra,	5102
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Pisa Cathedral.	5108
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Kremlin, Moscow.	5117
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Gate of Lions at Mycenæ.	5120
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Hagia Sophia, Constantinople.	5123
Court of Lions in the Alhambra.	5124
Hall of the Abencerrages in the Alhambra.	5125
Bamberg Cathedral.	5126
Notre Dame, Paris.	5127

Cathedral of Rheims.	5128
St. Stephen's Church, Vienna.	5129
Orvieto Cathedral.	5130
Piazza Della Signoria, Florence.	5131
Burgos Cathedral.	5132
Town Hall of Brussels.	5133
Wasilij Blagenoi, Moscow.	5134
Spire Cathedral.	5135
	5136
	5137

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## SHOW CASE DCXVI.

### SCIENTIFIC INSTRUMENTS.

#### *The Scientific School Master's Series.*

Pepy's Gas Holder. with gauge pipe, a preserve funnel  
and three brass stop cocks.

5138

Bunsen's burner.

5139

Apparatus to illustrate that in the production of water, the gases diminish one-third in volume, and the volumetric composition of steam. A U-tube with outside condenser tube, a glass cock and condensing worm.	5140
Leibig's Condenser.	5141
Iron ring covered with list.	5142
Hydrometer Immersion Tube, white glass with spout.	5143
Corks, assorted.	5144
India Rubber tubing.	5145
Deflagrating jars, 20 oz. ( three ).	5146
Receiver and quill.	5147
Sheet Iron Combustion Furnace for charcoal.	5148
Tube Furnace.	5149
Wire frame for fixing tapers.	5150
Kale's bottles ( six ). 16 oz.	5151
Receiver with two necks.	5152
Clay Crucibles.	5153

Pestle and wedgewood mortar.	5154
Copper water bath with four rings.	5155
Horseshoe magnet.	5156
Berlin glass crucibles with covers.	5157
Copper wire, 1 hank.	5158
Berlin Basins—1, 3, and 5.	5159
Steel wire.	5160
Glass spatula.	5161
Screw clips.	5162
Porcelain boat.	5163
Rasp.	5164
Cork borers.	5165
Cork file.	5166
Spatula (steel, 5 inch blade).	5167
Forceps.	5168



	449
Metallic wire gauze spoon for placing potassium, sodium, etc., under liquids.	5169
A pair of scissors.	5170
Watch glasses.	5171
One set of four filter cutters, tin, triangular.	5172
Brushes for cleaning test tubes and bottles, two.	5173
Cylindrical glass jars.	5174
Bottle, tubular, for use in Analytical processes. 16 oz.	5175
Glass globe for burning phosphorus in oxygen gas.	5176
Stop-cock and connector.	5177
One set of Beakers (No. 1 to 8) for hot solutions.	5178
Metallic cups on iron foot, two.	5179
Ground glass plates.	5180
Iron spoon.	5181
Methylated spirit, one pint.	5182
Deflagrating jar.	5183

Bladder with fernle.	5184
Basket, cane work, for test tubes.	5185
Pneumatic trough.	5186
Test tubes with a stand for the same.	5187
Pipette.	5188
Reduction tubes, hardest combustion glass, one bulb, two.	5189
Woulff's bottles having two necks, ( three ).	5190
Woulff's bottles having three necks, ( three ).	5191
Hand glass tubes.	5192
Thistle funnels.	5193
Glass flasks ( 8 oz. to 48 oz. )	5194
Separator with stopper and stop-cock without side neck.	5195
Safety funnel.	5196
Thermometer, 400° F. $\frac{3}{8}$ " paper scale.	5197
Decomposing water tubes, graduated, with platinum electrodes.	5198

	451
Three U tubes.	5199
Glass funnels.	5200
Glass globes with long neck, three.	5201
Iron tripod.	5202
Retort stand, two rings and clamp.	5203
Retort ( large ).	5204
Tabulated retorts for distillation, two.	5205
Iron stand and a funnel.	5206
Tube with stop-cock.	5207
Bunsen's Gas burner with three tubes.	5208
Forked supports, two.	5209
Bunsen's Gas burner with rose top to fit.	5210
Bunsen's Gas burner with two tubes.	5211
Bunsen's Gas burner.	5212
Spirit lamp.	5213

Platinum crucible.	5214
Platinum wire and foil.	5215
A pair of crucible tongs.	5216
Herapath's blow-pipe with ivory mouth piece.	5217
Triangles with pipe clays, two.	5218
Separator with stop-cock, with platinum electrode.	5219
Hoffmann's apparatus for decomposition of hydrochloric acid by sodium.	5220
Marchand's tubes for drying glasses, two.	5221
Ruhmkorff's Induction Coil with two condensing wires.	5222
Gas deflagrating spoon with brass cap.	5223
Flask with three necks and electrodes, to show the combustion of oxygen and nitrogen by electricity.	5224
Test papers.	5225
U Tube stand.	5226
Rising table or stand for raising apparatus.	5227

	453
Filter dryer, tin, conical.	5228
Lamp screens, sheet iron, on legs, with supports for sand baths, two.	5229
Tall glass jar.	5230
Leyden jar.	5231
Bunsen's battery, five cells.	5232
Star support, chimney and plain blow-pipe jet.	5233
Stand with a movable wooden ring.	5234
Stand with a clamp.	5235
Bohemian basin, flat bottom.	5236
Terrestrial globe in relief, according to the latest and best authorities. Berlin, 1888.	5237
Philips' Relief model showing all the forms of land and water. Designed by R. C. Hindshaw. Published by George Philip and Son, London.	5238
Patent Mechanical Globe. Designed by W. Rice, F.R.G.S., to illustrate the alternation and varying lengths of day and night, the succession of the seasons and other phe- nomena arising from the diurnal annual motions of the earth.	5239

Sanitary Model of houses at the corner of a street and also showing a grain dealer's shop which is situated just above a foul sewer. The defective drainage of one of the houses is most clearly displayed.

5240

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*Collection of Metallic Ores. 100 Specimens.*

Native arsenic. Saxony.	5241
Realgar. Saxony.	5242
Stibnite. Turkey.	5243
Valentenite. Borneo.	5244
Sulphide of Bismuth. S. Australia.	5245
Bismuthine. Cornwall.	5246
Native gold in quartz. Nova Scotia	5247
Gold ore. Province of Novara, Italy.	5248
Auriferous conglomerate. Johannesburg, Africa.	5249
Silver ore. Barrier range. N. South Wales.	5250
Native silver ore. Kongeberg, Norway.	5251
Silver ore. Molonglo. N. S. Wales.	5252

	455
Cinnabar. New Almeden, California.	5253
Native copper. Lake Superior.	5254
Native copper in rock. Mozambique, Africa.	5255
Gray copper. Cornwall.	5256
Black oxide of copper containing copper pyrites. Nilpena S. Australia.	5257
Copper pyrites. Cornwall.	5258
Copper pyrites, Bosomo, Norway.	5259
Bornite. S. Australia.	5260
Bornite. Grubescite, Cornwall.	5261
Tetrahedrite with quartz and blende. Kapnik. Hungary.	5262
Bournonite. Cornwall.	5263
Alacamite. Bolivia.	5264
Cuprite and native copper. Cornwall.	5265
Linarite, Lead hill, Scotland.	5266



Chalcosiderite. Cornwall.	5267
Pharmacosiderite. Cornwall.	5268
Chalcophyllite, copper mica. Cornwall.	5269
Libethenite. Cornwall.	6270
Malachite. S. Australia.	6271
Blue carbonate of copper. S. Australia.	5272
Chrysocolla, Mozambique, Africa.	5273
Tile ore. Cornwall.	5274
Galena, Kapnik, Hungary.	5275
Anglesite. Cumberland.	5276
Kamphylite. Cumberland.	5277
Pyromorphite. Cumberland.	5278
Jamesonite. Cornwall.	5279
Cerussite. Cumberland.	5280
Blende. Cumberland.	5281

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Blende. Kapnik. Hungary.	5282
Blende (Sphalerite) Skraloss. Norway.	5283
Blende. Hoakenstadt, Norway.	5284
Blende. West Prussia.	5285
Zincite, Sussexco, New Jersey.	5286
Willenite, Zinc Silicate. New Jersey.	5287
Catamine. Cumberland.	5288
Slannite. Cornwall.	5289
Cassiterite, Crysld. Illogan. Cornwall.	5290
Cassiterite, Finstone. Dolcoast. Cornwall.	5291
Rutite. Fogne. Norway.	5292
Smalline. Saxony.	5293
Cabaltine. Saxony.	5294
Cobalt ore, Snarum. Norway.	5295
Copper nickle. Bebra. Saxony.	5296

Nickel ore. Roms. Norway.	5297
Nickel ore, Pyorholine, Krageroe. Norway.	5298
Native Copper ore, Sudbury. Ontario.	5299
Uranite. Cornwall.	5300
Pitch blende. Cornwall.	5301
Antunite. Cornwall.	5302
Iron pyrites. Folkestone.	5303
Iron pyrites, Fondheim. Norway.	5304
Iron pyrites. Leicester.	5305
Iron pyrites. Crystals. New Orleans.	5306
Marcasite. Folkestone.	5307
Mundic. Iron pyrites. Cornwall.	5308
Mispickel, Arsenical iron pyrites. Cornwall.	5309
Hematite. Cumberland.	5310
Iron stone (Hematite) Devonport. S. Australia.	5311

	459
Specular iron with quartz crystals. Cumberland.	5312
Micaceous iron. Norway.	5313
Thuenite. Snarum. Norway.	5314
Magnetite iron. West Prussia.	5315
Magnetite ( crystal ). Norway.	5316
Magnetite iron. Lower Bothnia, Sweden.	5317
Loadstone. Magnet Cove, U. S. A.	5318
Franklinite. Franklin, New Jersey.	5319
Franklinite and Fincite. Franklin, New Jersey.	5320
Chromite. New Caledonia.	5321
Limonite, Giesser. Germany.	5322
Limonite. Stalactitic. Cumberland.	5323
Bog Iron ore. Alston, Cumberland.	5324
Umber. Forest Range. S. Australia.	5325
Umber. Cumberland.	5326

Yellow Ochre	S. Australia.	5327
Iron-stone.	Frodingham, Lincolnshire.	5328
Wolfram.		5329
Columbite.	Mitchell & Co., N. Carolina.	5330
Vivianite, Iron phosphate.	Cornwall.	5331
Chalybite.	West Prussia.	5332
Chalybite.	Cornwall.	5333
Chalybite. (Pseudomorphs).	Cornwall.	5334
Clay Iron-stone.	Hanley. Staffordshire.	5335
Clay Iron-stone.	Neut head. Cumberland.	5336
Pyrolusite.	Manganese oxide.	5337
Psilomelane.	Cornwall.	5338
Fowlerite. (Rhodoite)	Franklin. New Jersey.	5339
Rhodochrosite and Pyrites.	Lake Co. Colorado.	5340
Model of a Mail, Passenger, and Cargo steamer for the Indian Coast.	S. S. "Kasara." Presented by the Marquis of Ailsa. Culzean Castle, Scotland.	5341

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## SHOW CASE No. DCXVII.

*Reproductions of Antiquities from the British  
Museum, copied by permission of the Trustees.*

Gate socket. Cast of one found in Babylonia. Some of these  
are 6000 years old, or from B. C. 4200.

5344

Cast of the Portland vase. The original was found in a  
marble sarcophagus in the Monte del Grano, near Rome,  
and was formerly in the Barberini Palace. The ground  
of the vase is of blue glass, the design is cut in a layer of  
opaque white glass. The composition is supposed to re-  
present on the obverse, Thetis consenting to be the bride  
of Peleus, in the presence of Poseidon and Eros; on the  
reverse, Peleus and Thetis on Mount Pelion. On the  
bottom of the vase, which is detached, is a bust of Paris.

5345

Eagle, cast in plaster.

5346

Cast in plaster of a bronze Lion weight inscribed in Assy-  
rian and Phœnician.

5347

Cast of portion of the ornamentation of the Freize of the  
Erechtheum, a temple opposite the Parthenon on the  
Acropolis, Athens.

5348

Cast of a tragic mask,

5349

Casts in plaster of portions of bronze bands which ornamented the gates set up at Tell-Balawat, which lies to the south-east of Nineveh, by Shalmanesar II., B. C. 860-825, to record his battles and conquests. They were excavated by Mr. Hormuzd Rassam in 1879. (Six).

5350-55

Tablet of Nebobaladan, King of Babylon, about B. C. 900 (nearly 2800 years ago). It contains six columns of beautifully executed Babylonian writing and a picture of the worship of the sun-god, Samas. Samas sits in a porch holding a ring and a short rod, above are three circles representing the Moon, the Sun and Istar or Venus. Two lines of writing above read, the Moon god, the Sun god, and Istarim. On a stool in front is the disk of the Sun supported by cords held by two spirits above the roof. In front are a priest, a king, and another figure, and above their heads is this inscription:—"The image of the Sun god—the Mighty Lord—the dweller in the temple of Para (or Bara) which is within Sippara."

5356

Contract tablet dated in the third year of Nabonidus. Subject:—Sale of land near Babylon.

5357

Cast of a Panel having two figures ( and Sappho) in relief.

5358

Cast of a fragment of Assyrian copies of the tablet of the series entitled the "Story of Gistubar." The text inscribed upon them contains the account of the Flood which is told to the mythical hero Gistubar by Sit (?)—napistim, the Babylonian Noah. The history runs that the gods within Suripak, a city on the Euphrates, determined to send a deluge. Sit (?)—napistim was bidden to build a ship, and to embark in it with all his goods, the members of his family, and the beasts and cattle of the field. The flood follows its abatement: the resting of the ship on the mountain of Nizir, and the sending forth of a dove, a swallow, and a raven on the seventh day; and then the coming forth from the ship. The God Bél, however, was wroth that the race of mankind had not been utterly



destroyed, but was appeased by the God Ea, and the patriarch and his family were allowed to live; and the gods took him and his wife to a "remote place at the mouth of of the rivers" (Kurnah?) at the junction of the Tigris and Euphrates, about ninety miles from the head of the Persian Gulf.

5359

Porphyry cylindrical object (supposed to be the top of a sceptre) inscribed with the name of Sargon I., King of Agade, (Babylonia: B. C. 3750 (5640 years ago). This is the oldest inscribed stone in the British Museum. On it is cut in "line" Babylonian writing (a very early form)—"I, Sargon, the King of Agade to the sun god (Samas) in Sippara have dedicated."

5360

Casts in plaster of 12 cylindrical Pehlvi seals from B. C. 3800. Nos. 5361-72.

Babylonian seal. Inscribed with cuneiform characters. Gistubar and lion. Heabani and bull. Jasper. (2000). (Cast in plaster).

5361

Winged composite figures supporting *feroher* (Moon god) Carnelian. (Cast of cylinder in plaster).

5362

Phoenico-Assyrian. Tri-une divinity. Priest and composite creature and a Phoenician. (Cast of cylinder in plaster).

5363

Persian cylinder or seal of King Darius cir. B. C. 420, Chalcedony. Inscribed in three languages in the cuneiform character, "I am Darius the Great King" (Persian, Median, and Babylonian). Cast by A. Ready.

5364

Perso-Phoenician warriors in combat. Cast of a cylinder in plaster.

5365

Babylonian seal of a scribe cir. B. C. 3800, "Gistubar struggling with a lion," Jasper. Cast in plaster. 5366

Babylonian seal of a brother of the King Erech, B. C. 2500. Jasper. Cast in plaster. 5367

Babylonian God of Agriculture. Attendants, worshippers with corn and plough. B. C. 2400, Jasper. Cast of cylinder in plaster. 5368

Babylonian. Cir. 2400 B. C., seated Divinity with cup, composite human and serpent form body, behind him gates of a temple steatite. Cast of cylinder in plaster. 5369

Priest officiating at altars of Sun and Moon gods. Cast of cylinder in plaster. 5370

Inscribed seal. Divinity, worshipper, and attendant. Chalcedony. Cast in plaster. 5371

Assyrian, best style, cir. 1000 B. C., winged figures officiating at the sacred tree, Carnelian. Cast of cylinder in plaster. 5372

Cast of a cylinder. The cylinders and bricks, &c., in the British Museum are the chief authorities for Assyrian history from B. C. 1400 to 609.

Cast of a Terra-cotta (cylinder so called) of Nebuchadnezzar. 5373

Cast of a figure. Bacchante from Ancient Greece. 5374

## SHOW CASE No. DCXVIII.

*Apparatus and Materials for a Course of Lectures  
on popular Hygiene.*

Spirit lamp and stand.	5375
Glass bottles Nos. 5376 to 5382 to contain chemicals, &c.	
1. Hard water.	
2. Methylated spirits.	
3. Curd producer (white vinegar).	
4. Soft water.	
5. Lime water.	
6. Crude carbolic acid.	
7. Soap solution.	
Bottle for experiment.	5383
Spare bottle.	5384
Bottle containing lime powder.	5385
Apparatus to generate and collect gasses.	5386
Tray containing materials in small circular boxes and other articles. Nos. 5387 to 5406.	
1. Sugar to colour filter water.	
2. Tin dishes.	
3. Magnesium.	
4. Tapers.	
5. Soda carbonate.	
6. Curd soap.	
7. Gluten bag.	
8. Burners.	
9. Glasses on stand (two).	
10. Glass stoppered phial for phosphorus.	
11. Gluten bag containing peas.	
12. Small tin case containing oxide of manganese.	

13. Splints (two) wood.
14. Ruler, wood, small.
15. Iron instrument.
16. Triangular, thick cloth.
17. Triangular bandage printed with illustrations showing the various forms of the uses of the triangular bandages.
18. Bandages, four, assorted.
19. Funnel, glass.
20. Brass instruments, three.

Tobin's tubes to illustrate ventilation, two.	5407-8
M'Kinall's Circular tube to illustrate ventilation.	5409
Ellison's Conical ventilator.	5410
Ventilator.	5411
Frame with double perforated zinc plates to illustrate ventilation.	5412
Sheringham valves, three, to illustrate ventilation.	5413-5
Piece of wood to illustrate Dr. Hinckes Bird's principle of ventilation.	5416
Wood instrument with perforated zinc top to illustrate ventilation.	5417
Disconnecting trap.	5418
Syphon trap.	5419
Syphon.	5420

	467
Sanitary paper.	5421
Varnished paper.	5422
Spring Brass Clip for test tubes.	5423
Triangle with brass pipes.	5424
Brush for cleaning test tubes and phials.	5425
Slab, square, stone, small.	5426
Forceps, a pair of	5427
Spoon with a wooden handle for heating purposes.	5428
Filter with a wooden handle.	5429
Cork-borer.	5430
Bunsen's burner.	5431
Gas Deflagrating cup on stand.	5432
Blocks of wood, four, marked H, O, N, C, to designate Hydrogen, Oxygen, Nitrogen, and Carbon gases.	5433-6
Chemicals in phials. Nos. 5437-68.	
1. Carbon.	
2. Phosphate of lime. (Bone earth).	

3. Magnesium.
4. Magnesia.
5. Iron.
6. Oxide of iron.
7. Dextrine starch.
8. Grape sugar.
9. Collodion flexile, in a glass phial.
10. Gelatine.
11. Gluten.
12. White powder. Lime (?).
13. Animal charcoal for filter demonstration.
14. Charcoal (?).
15. Sulphate of iron, to colour whitewash.
16. Chloride of lime, disinfectant for drains, &c.
17. Lactose.
18. Carbolic earth.
19. Permanganate of potash.
20. Vaseline.
21. Carbon oil.
22. Friar's Balsam.
23. Terebene.
24. Sponge.
25. Gutta percha.
26. Surgeon's lint.
27. Oil silk.
28. Charcoal, wood charcoal for burning in oxygen.
29. Green flame boron.
30. Yellow flame sodium.
31. Violet flame, potassium.
32. Red flame, calcium.

Litmus paper. Two books.

5469

Test tubes, four, on foot.

5470-73

Test tube.

5474

Tube with brass fitting.

5475

	469
Glass rods, four.	
	5476-9
Brass wire with holder for burning.	
	5480
Lamp with chimney, tin.	
	5481
Candle stand, tin.	
	5482

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*Collection of Objects used in the Object Lesson Cards  
of Messrs. Oliver & Boyd of Edinburgh, and the  
Elementary Cards of Mons. Deyrolle of Paris.*

Collection of Shells used in teaching Object Lessons.

Lillorina hillurea.	5483
Limnæa stagnatis. France. Pond snail shell.	5484
Auodonta littoralis. Neulins.	5485
Mytillus edulis. Muscle shell.	5486
Strongillocentrotus lividus. O. AH. Sea-urchin.	5487
Planorbis corneus. France.	5488
Helix aspersa. France. Land snail shell.	5489
Sepia officinalis. Oc. AH. Sepia shell.	5490
Murex pomum. Oc. Ind.	5491



Ostrea edulis. Oc. AH. Oyster shell.	5492
Cypræa tigris. Oc. Ind. Cowrie.	5493
Spongia usitatissima. Medit. Sponge.	5494

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*Specimens of Rocks and Minerals used in teaching  
Object Lessons.*

Chalk.	5495
Pilugium.	5496
Coarse Lime.	5497
Lava.	5498
Red Paving stone.	5499
Basalt.	5500
Clay of Gaul.	5501
Calcite.	5502
Porphyry.	5503
Slate.	5504

Baryte.	471
Blende.	5505
Mica.	5506
Galena.	5507
Asbestos.	5508
Oligist.	5509
Feldspath.	5510
Honille (?)	5511
Lithographic calcite.	5512
Siderose.	5513
Emery.	5514
Chalcopyrite.	5515
Quartz.	5516
Plastic clay.	5517
Silex.	5518
	5519

Native Sulphur. Brimstone.	5520
Cooked piece of timber.	5521
Fossiliferous Silex.	5522
Gypsum.	5523
Crystallised carbonate of lime.	5524

*Collection of Articles used in teaching Object  
Lessons contained in a tray.*

Nos. 5525 to 5571

- |                                      |                         |
|--------------------------------------|-------------------------|
| 1. Ox leather.                       | 24. Rope.               |
| 2. Calf leather.                     | 25. Fibres of flax.     |
| 3. Horse leather.                    | 26. Thread.             |
| 4. Sheep leather.                    | 27. Blue paper.         |
| 5. Parchment.                        | 28. Bark paper.         |
| 6. Sheep-wool.                       | 29. Printing paper.     |
| 7. Woollen thread (or<br>worsted).   | 30. Silk paper.         |
| 8. Raw cotton.                       | 31. Card board.         |
| 9. Cotton thread.                    | 32. Coarse brown.       |
| 10. Lace.                            | 33. Fine brown.         |
| 11. Linen.                           | 34. Blotting paper.     |
| 12. Cambric.                         | 35. Laid writing paper. |
| 13. Sail cloth.                      | 36. Wove writing paper. |
| 14. Fibres of hemp.                  | 37. Silk velvet.        |
| 15. Carpet.                          | 38. Satin silk.         |
| 16. Drugget.                         | 39. Sarsnet silk.       |
| 17. Flannel.                         | 40. String.             |
| 18. Cloth.                           | 41. Sackcloth.          |
| 19. Cotton-velvet.                   | 42. Wasp.               |
| 20. Jean.                            | 43. Moths.              |
| 21. Calico and Unbleached<br>calico. | 44. Bees.               |
| 22. Cocoon of silk worm.             | 45. Beetles.            |
| 23. Raw silk.                        | 46. Butterflies.        |
|                                      | 47. Fur.                |

*Collection of Articles used in teaching Object  
Lessons contained in a tray.*

Nos. 5572 to 5615

- |                    |                     |
|--------------------|---------------------|
| 1. Shell-lac.      | 23. Ginger.         |
| 2. India rubber.   | 24. Cork.           |
| 3. Gutta percha.   | 25. Bristles.       |
| 4. Sugar-cane.     | 26. Horse hair.     |
| 5. Brown sugar.    | 27. Bone.           |
| 6. Loaf sugar.     | 28. Ivory.          |
| 7. Rasins.         | 29. Cinnamon.       |
| 8. Figs.           | 30. Wax candle.     |
| 9. Fir-cone.       | 31. Sealing wax.    |
| 10. Walnut.        | 32. Quills.         |
| 11. Hazel-nut.     | 33. Horn.           |
| 12. Cane.          | 34. Whale bone.     |
| 13. Basket willow. | 35. Tortoise shell. |
| 14. Wafers.        | 36. Cloth.          |
| 15. Sponge.        | 37. Pine.           |
| 16. Sea weed.      | 38. Mahogany.       |
| 17. Oak bark.      | 39. Oak.            |
| 18. Nut galls.     | 40. Pencil cedar.   |
| 19. Feathers.      | 41. Glue.           |
| 20. Acorns.        | 42. Down.           |
| 21. Nutmeg.        | 43. Soap.           |
| 22. Mace.          | 44. Bees wax.       |

*Collection of Articles used in teaching Object Lessons  
contained in a tray.*

Nos. 5616 to 5665

- |                           |                   |
|---------------------------|-------------------|
| 1. Iron ore.              | 10. Zinc ore.     |
| 2. Hoop iron.             | 11. Sheet zinc.   |
| 3. Wrought and cut nails. | 12. Lead ore.     |
| 4. Key.                   | 13. Sheet lead.   |
| 5. Cast iron.             | 14. Lead shot.    |
| 6. Watch spring.          | 15. Pewter.       |
| 7. Needles.               | 16. Copper ore.   |
| 8. Pen-knife.             | 17. Sheet copper. |
| 9. Scissors.              | 18. Sheet brass.  |

19. Pins.
20. Tin ore.
21. Pure tin.
22. Tin plate.
23. Silver ore.
24. Silver plate.
25. Quicksilver ore or  
cinnabar.
26. Gold leaf.
27. Quicksilver.
28. Flint.
29. Bottle glass.
30. Plate glass.
31. Mortar.
32. Fuller's earth.
33. Chalk.
34. Putty.
35. Granite.

36. Coal.
37. Slate.
38. Clay.
39. Marble.
40. Whelk.
41. Perriwinkle.
42. Mussel.
43. Limpet.
44. Snail-shell.
45. Mother-o'-pearl.
46. Ostrea pecten.
47. Coral.
48. Alum.
49. Gypsum.
50. Sulphur.
51. Red ware.
52. Bath stone.
53. Earthen ware.

*Collection of Articles used in teaching Object Lessons  
contained in a wooden tray.*

Nos. 5666 to 5704

1. Oat meal.
2. Flour.
3. Oil.
4. Ink.
5. Honey.
6. Vinegar.
7. Saffron.
8. Tea.
9. Indian wheat or maize.
10. Wheat.
11. Barley malt.
12. Pearl barley.
13. Barley meal.
14. Bran.
15. Rye.
16. Beans.
17. Cloves.
18. Allspice.
19. Pepper.
20. Mustard seed.

21. Sago.
22. Rice.
23. Camphor.
24. Plaster of Paris.
25. Gum Arabic.
26. Emery powder.
27. Sand.
28. Rock salt.
29. Pearl ash.
30. Chloride of lime.
31. Soda.
32. Oats.
33. Hemp seed.
34. Flax seed.
35. Peas.
36. Hops.
37. Cammomile flowers.
38. Currants.
39. Raw and roasted coffee.

*German Collection of Object Lessons.*

Nos. 5705 to 5797

- Malachite, oxydized copper ore.
- Red copper ore, oxydized copper ore.
- Copper-pyrite.
- Variegated or party coloured copper ore.
- Copper, kiln product.
- Copper nail.
- Copper blank on copper plate, impressed.
- Copper plate.
- Thin copper plate.
- Spangle, impressed on coloured copper plate.
- Pattern of copper plate.
- Copper wire.
- String of silk thread spun with white plated copper wire.
- Catgut, spun with white plated copper wire.
  
- Iron wire.
- Copper ashes.
- Copper vitriol.  
blue.
- Verdigris.
- Brass casting.
- Sheet brass.
- Brass plate.
- Brass plate, for making gold spangle.
- Brass plate, yellow metal.
- Nail, sand cast, yellow metal.
- Brass wire.
- Twist of brass wire.
- Chain of brass wire.
- Brass wire pin.
- Iron nail with button in cast brass, yellow.
- Iron nail with button in cast brass, white.
- Button of brass plate, impressed.
- Button of two brass plates, compounded.
- Pallet or spangle, impressed in circular fretted brass wire,  
yellow.
- Pallet impressed in circles.
- Pricking needle, hand made.
- Pricking pin, hand made, plated brass wire.
- Pricking pin, machine made, plated brass wire.

Pricking pin, machine made, covered over with lac dye.

Texture with yellow metal thread, brass, striped.

Texture with whitened metal thread, brass, striped.

Object of Tombac or penchbeck, unfinished.

Gold leaf (counterfeit).

Cast bronze.

Artificial rose.

Bronze medal or coin.

Bell metal.

New silver.

Object of new silver.

New silver plate.

Potter's ore. (Lead)

Pure lead. Kiln product.

Quick shot or perpendicular lead crystals.

Tea lead.

Small shot ; different sort.

Lead.

Lead glass.

Lead wire.

Letters (letter or book).

Silver to illustrate smoothness.

Vermillion.

White lead.

Yellow chrome.

Red chrome.

Lead sugar.

Tin stone.

Tin, pure.

Rasp of tin.

Tin salt.

Ornament made of tin.

Tin solder.

Tin button.

Tin capsule for wine bottle or flask, impressed on tin plate.

Mirror glass with amalgam of tin and mercury.

Tin ashes, putty.

Soft gold.

Silver leaf.

Gold leaf.

White plate (iron plate, tinned by means of dipping in



Iron wire plait (iron plate or dissolved tin).  
 Iron plate with tin crystals.  
 Zinc blind or folding screen.  
 Zinc sheet.  
 Zinc white.  
 Zinc nail.  
 Zinc vitriol.  
 Iron wire, galvanic.  
 Wire-tack, galvanic.  
 Zinc wire.

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### WALL FRAME No. DCXIX.

Fac-simile of the Articles of Liberties (Magna Charta), demanded by the Barons from King John. Presented by the Trustees of the British Museum.

5798

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### WALL FRAMES Nos. DCXX to DCXXIII.

5799

5800

5801

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### WALL FRAME No. DCXXIV.

Natural History Object Lesson Card. Mineral Kingdom.  
 Specimens of minerals employed in the arts with their descriptions. No. 20. Emile Deyrolle, Paris.

5802

## WALL FRAME No. DCXXV.

Autotype fac-simile of an original mortgage deed of William Shakespeare. Presented by the Trustees of the British Museum.

5803

## WALL FRAME No. DCXXVI.

Natural History Object Lesson Card. Vegetable Kingdom. Illustrations of acotyledonous plants with their descriptions. No. 18. Emile Deyrolle, Paris.

5804

## WALL FRAME No. DCXXVII.

Natural History Object Lesson Card. Geology. No. 19. Emile Deyrolle, Paris.

5805

## WALL FRAME No. DCXXVIII.

Autotype fac-simile of a contemporary and official copy of the Magna Charta.

5806

## WALL FRAME No. DCXXIX.

Magna Charta of King John. A. D. 1215.

5807

## WALL FRAME No. DCXXX.

Natural History Object Lesson Card. Vegetable Kingdom. Illustrations of monocotyledonous plants—wheat and onion—with their descriptions. No. 17. Emile Deyrolle, Paris.

5808

# WALL FRAME No. DCXXXI.

Natural History Object Lesson Card. Vegetable Kingdom. Illustrations of dicotyledonous plants—pine and oak—with their descriptions. No. 16. Emile Deyrolle, Paris.

5809

# WALL FRAME Nos. DCXXXII & DCXXXIII.

5810-11

# WALL FRAME No. DCXXXIV.

Genealogical tree showing the compounds existing in, and derived from, Coal Tar. Compiled by B. Nickels, F.C.S., F.I.C.

5812

# WALL FRAME No. DCXXXV.

Natural History Object Lesson Card. Vegetable Kingdom. Illustrations of dicotyledonous plants—olive, apple, rape, and vine—with their descriptions. No. 14. Emile Deyrolle, Paris.

5813

# WALL FRAME No. DCXXXVI.

Natural History Object Lesson Card. Vegetable Kingdom. Illustrations of dicotyledonous plants—hemp, cotton, and flax—with their descriptions. No. 15. Emile Deyrolle, Paris.

5814

## WALL FRAME No. DCXXXVII.

*Planta Artificata or Artificial Flowers for teaching  
Materia Medica or Botany as applied to Medicines.*

Swietenia Mahagoni Cedrelaceæ. Mahogany. Tropical  
America.

5815

Hymenæa Courbaril. Caesalpiniaceæ. Copal. South Ame-  
rica.

5816

Humulus Lupulus. Cannabinaceæ. Hop. Europe.

5817

Cichorium Intybus. Compositæ. The wild or Indian  
Endive. Kasni. India and Central Europe.

5818

Rubia Tinctorum. Rubiaceæ, Madder. Manjit. India,  
Ceylon, and Malacca.

5819

Ceratonia Siliqua. Caesalpiniaceæ. The Crob, St. John's  
Bread, or Locust Bean. Karnûb. Countries on the  
Mediterranean, Syria, and Western Asia.

5820

Agave Americana. Amaryllidaceæ. The Century Plant.  
The American Aloe. Carata. Bâns keora. India and  
America.

5821

Podophyllum Peltatum. Berberidaceæ. Wild Lemon.  
North America.

5822

Hydrastis Canadensis. Ranunculaceæ. Yellow Bloodplant.  
Canada.

5823

## WALL FRAME No. DCXXXVIII.

*Planta Artificata or Artificial Flowers for teaching  
Materia Medica or Botany as applied to Medicines.*

*Diospyros Ebenum.* Ebenaceæ. Ebony. Abnus. East  
Indies and Ceylon.

5824

*Hæmatoxylon Campechianum.* Caesalpiniaceæ. Logwood  
or Campeche wood. Campeche. Bay in Mexico and  
West India.

5825

*Cananga Odorata.* Anonaceæ. Philippine Islands and Java.

5826

*Ipomæa Purga.* Convolvulaceæ. Jalap. Mexico and  
South of Europe.

5827

*Solanum Lycopersicum.* Solanaceæ. Tomato or Love apple.  
South America, Europe, and India.

5828

*Physostigma Venenosum.* Papilionaceæ. Calabar Bean.  
West Tropical Africa.

5829

*Aloe vulgaris.* Liliaceæ. Indian Aloe. Ghikuwari. India  
and East Africa.

5830

*Gentiana Lutea.* Gentianaceæ. Common European yellow  
gentian. Alpine and Sub-Alpine regions of South Europe.

5831

*Turnera Aphrodisiaca.* Turneraceæ. Damiana plant. Mexico.

5832

*Strophantus Hispidus.* Apocynaceæ. Cord Flower. Tropical  
West Africa.

5833

Bixa Orellana. Bixaceæ. Orleans tree. Latkan. West  
Indies, India, and Burma.

5834

# WALL FRAME No. DCXXXIX.

## *Artificial Flowers for teaching Materia Medica or Botany as applied to Medicines.*

Iris Pseudacorus. Indaceæ. Water Lily, false Calamus  
or Sweet Flag.

5835

Quassia Amara. Simarubææ. Quassia. Tropical America  
and Himalaya regions.

5836

Paris Quadrifolia. Smilaceæ. Wolf Cherry. Europe.

5837

Strychnos Nux Vomica. Loganiaceæ. Nux Vomica.  
Kuchla. Coromandel, Ceylon.

5838

Olea Europæa. Oleaceæ. Olive. Southern Europe and  
India.

5839

Caryophyllus Aromaticus. Myrtaceæ. Cloves. Long.  
Molluccas.

5840

Hevea Guyanensis. Euphorbiaceæ, Caoutchuc. Tropical  
South America, Asia, and Africa.

5841

Anona Cherimolia. Anonaceæ. Ccherimoyer. Native of  
Peru.

5842

Punica Granatum. Granateæ. Pomegranate. Anar.  
North Africa, Southern Europe, and India.

5843

*Nepenthes Destillatoria.* *Nepenthaceæ.* Indian Pitcher  
Plant. India and Ceylon.

5844

*Cephaëlis Ipecacuanha.* *Rubiaceæ.* *Ipecacuanha.* Tropical  
America.

5845

*Arum Maculatum.* *Araceæ.* Cuckoopint. Central Europe.

5846

*Myroxilon Peruiferum.* *Papilionaceæ.* Balsam of Peru.  
Tropical America.

5847

## WALL FRAMES Nos. DCXL & DCXLI.

5848-9

## WALL FRAME No. DCXLII.

Natural History Object Lesson Card. Vegetable Kingdom.  
Illustrations of dicotyledonous plants—Bean, white nettle.  
and madder—with their descriptions. No. 12. Emile  
Deyrolle, Paris.

5850

## WALL FRAME No. DCXLIII.

Natural History Object Lesson Card. Vegetable King-  
dom. Illustrations of dicotyledonous plants—carrot and  
potato—with descriptions. No. 13. Emile Deyrolle, Paris.

5851



## WALL FRAME No. DCXLIV.

5852

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WALL FRAME No. DCXLV.

Cox & Co.'s Practical Object Lessons. Series 19. The compass and how it is used.

5853

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WALL FRAME No. DCXLVI.

Natural History Object Lesson Card. Vegetable Kingdom. Illustrations and nomenclature of the different parts of fruits and seeds and the process of germination. No. 10. Emile Deyrolle, Paris.

5854

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WALL FRAME No. DCXLVII.

Natural History Object Lesson Card. Vegetable Kingdom. Illustrations of the plants belonging to the order—Composite. No. 11. Emile Deyrolle, Paris.

5855

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WALL FRAME No. DCXLVIII.

Natural History Object Lesson Card. Vegetable Kingdom. Specimens of wood employed in useful arts with descriptions. No. 8. Emile Deyrolle, Paris.

5856

## WALL FRAME No. DCXLIX.

Natural History Object Lesson Card. Vegetable Kingdom.  
Illustrations and nomenclature of the different parts of  
leaves and flowers.

5857

## WALL FRAME No. DCL.

*Planta Artificata or Artificial Flowers for teaching  
Materia Medica or Botany as applied to Medicines.*

Nos. 5858 to 5879.

Piper Nigrum. Piperaceæ. Black Pepper. *Kali Mirach.*  
East Indies.

5858

Rheum officinale. Polygonaceæ. Rhubarb. *Rewand cheeni.*  
North China.

5859

Smilan officinalis. Smilacææ. Jamaica Sarsaparilla. South  
America.

5860

Thea Chinensis. Tea-plant. *Chah Cheen ki.* China.

5861

Theobroma Cacao. Buttneriaceæ. Coco-plant. Central  
America.

5862

Vanilla Planifolia. Orchidaceæ. Vanilla. Tropical America.

5863

Citrus Aurantium. Aurantiaceæ. Orange. *Narangi.* Tro-  
pical Asia and sub-tropical zone.

5864

Coffea Arabica. Rubiaceæ. Coffee. *Bun* Abyssinia and  
dry tropical parts.

5865

- Corchorus Textilis.* Tiliaceæ. Hemp-plant. Jute. *San.*  
 East Indies. 5866
- Erythroxyton Coca.* Erythroxyllaceæ. Coco-plant. Peru.  
 5867
- Gossypium.* Herbaceum. Malvaceæ. Indian Cotton.  
*Rooyee.* Southern Asia. North America. 5868
- Helleborus Niger.* Ranunculaceæ. Black Hellebore or  
 Christmas Rose. *Kalikulki.* M. Europe. 5869
- Hyoscyamus Niger.* Solanaceæ. Henbane. *Khârasâni*  
*Ajwân.* Middle and Southern Europe. 5870
- Nicotiana Tabacum.* Solanceæ. Tobacco. *Tamâkhoo.*  
 Central America, Europe, and Southern Asia. 5871
- Oryza Sativa.* Gramineæ. Rice. *Chânwal.* India and  
 other warmer regions. 5872
- Ricinus Communis.* Euphorbiaceæ. Castor oil plant.  
*Irând.* East and West India. 5873
- Cassia Lentiva.* Leguminosæ. Senna. 5874
- Camphora officinalis.* Lauraceæ. Camphor. *Kapoor.* China  
 and Japan. 5875
- Solanum Tuberosum.* Solanaceæ. The Potato. *Aloo.*  
 Chili, Peru, Europe, and India. 5876
- Juglans Regia.* Juglandaceæ. Walnut. *Akhrot.* Native  
 of Asia. 5877

*Pilocarpus Pennatifolius.* *Pilocarpus.*

5878

*Zingiber officinale.* *Zingiberaceæ.* Ginger. *Adrakh Soonth.*  
Tropical Asia.

5879

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### WALL FRAME No. DCLI.

*Planta Artificia or Artificial Flowers for teaching*  
*Materia Medica or Botany as applied to Medicines.*

Nos. 5880 to 5903.

*Althæa officinalis.* *Malvaceæ.* Marsh Mallow. *Gulkhairo.*  
Central Europe and India.

5880

*Atropa Belladonna.* *Solanaceæ.* Deadly Nightshade (*Belladonna*). *Anoor Shefa.* Central Europe.

5881

*Calendula officinalis.* *Compositæ.* Marigold (*Calendula*)  
*Akblulmulk.*

5882

*Datura Stramonium.* *Solanaceæ.* Thornapple. (*Datura*).  
*Dhatoora.* Asia.

5883

*Iris Germanica.* *Iridææ.* German Iris. *Sosun.* Europe.

5884

*Lilium Bulbiferum.* *Liliaceæ.* Scarlet Lily. Germany.

5885

*Nymphaea Alba.* *Nymphaeaceæ.* Water-lily *Nilofar.*  
*Kumud.* Central Europe and Kashmir.

5886

- Rosa Canina*. Rosaceæ. Dog Rose. *Jangli gulab*. Central Europe. 5887
- Rubus Idæus*. Rosaceæ. Raspberry. North and Central Europe. 5888
- Solanum Dulcamara*. Solanaceæ. Bitter Sweet. *Rooba Bareek*. Central Europe and Himalaya regions. 5889
- Aristolochia Clematitis*. Aristolochiaceæ. Birthwort. Central and Southern Europe and India. 5890
- Colechicum Autumnale*. Liliaceæ. Meadow Saffron. *Kesar*. Europe. 5891
- Crocus Sativus*. Iridaceæ. Saffron. *Kesar*. Persia and Kashmir. 5892
- Cydonia Japonica*. Pomaceæ. Japanese Quince. *Bihl*. Japan. 5893
- Geranium Pratense*. Geraniaceæ. Meadow Crane's bill. *Ratanjot*. North Europe and India. 5894
- Linum Usitatissimum*. Linaceæ. Flax. Linseed. *Alsi*. Europe and India. 5895
- Nuphar Luteum*. Nymphæaceæ. Yellow Searose. Europe. 5896
- Oenothera Biennis*. Onagraceæ. The Evening Primrose. Native of Virginia. 5897

*Physalis Alkekengi*. Solanaceæ. Indian Cherry. *Habbi*  
Kahanj. Europe and India.

5898

*Sinapis Arvensis*. Cruciferae. Field-mustard. Hedge-  
mustard. *Sarson*. Atlantic, North America, and India.

4899

*Prunus Amygdalus*. Amygdalaceæ. Almond. *Badam*.  
Afghanistan, Persia, Kashmir, and the Punjab.

5900

*Cinchona officinalis*. Cinchona. Rubiaceæ. Loxa or  
Crown Bark. *Konain ka darakht*. The Nilgiris, Ceylon,  
and Sikkim.

5901

*Cinnamomum Zeylanicum*. Lauraceæ. Cinnamon. *Dul-*  
*chini*. Ceylon.

5902

*Ficus Carica*. Artocarpaceæ. Common Fig. *Anjeer*.  
South Asia and Mediterranean Coast.

5903

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### WALL FRAME No. DCLII.

School Lesson Sheet. Agricultural Series. No. 1. Locusts.  
Prepared by the Revenue and Agricultural Department  
of the Government of India. Calcutta.

5904

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### WALL FRAME No. DCLIII.

Lists of trees and shrubs in the Jeypore State, Rajputana.  
Compiled by the State Forest Department. Jeypore

5905

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### WALL FRAME No. DCLIV.

Cox & Co.'s Practical Object Lessons. Series 11. Wood.  
Twenty-four specimens.

5906

## WALL FRAME No. DCLV.

Specimens showing the different stages in the manufacture  
of Johann Faber's Lead Pencils. Germany.

5907

## WALL FRAME No. DCLVI.

Specimens illustrating the process of making Black Lead  
Pencils and Pen-holders, by R. Wilson & Co., Ltd., Kes-  
wick. Cumberland.

5908

## WALL FRAME No. DCLVII.

School Lesson Sheet. Agricultural Series. No. 2. The  
wheat weevil.

Prepared under the direction of the Trustees of the Indian  
Museum, Calcutta.

5909

## SHOW CASE No. DCLVIII.

Model of the Taziya (representation of the mausoleum)  
borne on the shoulders of men accompanied with music  
and recitations to illustrate the great mourning observed  
throughout the Moslem world annually in remembrance  
of the first Mohamedan martyrs Husan and Husain. Clay  
figures.

5910

Krishna riding on a horse composed of Gopikas (milkmaids).

5911

A demon with a horn, riding on a camel the different parts  
of which are made of a variety of animals.

5912



*Models in clay to illustrate some of the most atrocious crimes committed by highway robbers or Thugs.*

Thugs strangling a traveller.

5913

Thugs intending to strangle a banker. The fakir or the religious devotee in front is a confederate who decoys the unfortunate victim.

The inveigher or the man who entraps or beguiles the victim is called Sotha.

5914

Thugs strangling a sepoy. The strangler is called Bhatot.

5915

Thugs beheading a man whose property they have taken.

5916

Thugs who have slain one man, and are punishing the other by tying him to the trunk of a tree by the hands and feet.

5917

Thugs having murdered a woman are taking off her jewels.

5918

Robbers destroying their victim by pushing him into a well by, when he was in the act of drawing water.

5919

Rajput lady heroine. Three robbers attempted to rob a woman of her clothes, when she asked them to turn their backs, so that she might take her garments off without being seen. She borrowed the sword of one of them to cut through a knot in her dress, and then suddenly cut all three down in succession. Her brave attendant hid himself behind in the grass.

5920

Thugs sharing the spoil after strangling their victim.

5921

Thugs burrying a victim and dividing the spoil. The fakir or the religious devotee in front was a confederate who decoyed the unfortunate victim.

The man who buries the dead is called "Laghai."

5922

Group of friends smoking at a shop.

5923

Shop of a Sakien or a woman who provides her customers with articles for smoking. A person entertains his friends with music while they are smoking.

5924

Smoking Saloon with a number of persons smoking inside. Bengal.

5925

## LONG SHOW CASE No. DCLIX.

Clay figures at Shivaite or Vaishnavi temples, men and women at caste feasts, and devotees undergoing various forms of self torture described in books of Hindu religion. (For complete description see the end of the catalogue.)

## LONG CASE No. DCLX.

*Models to illustrate Vegetable Morphology for Botanical instruction. Manufactured by R. Brendel, Berlin.*

### A.—CRYPTOGAMS.

#### I.—THALLOPHYTA.

*Chara fragilis.* Characeæ.

(a) Fruiting plant with oogonium and antheridium.  $\times 100$ .

(b) Peripheric cell of the antheridium, bearing the manubrium with threads producing the spermatozoids.  $\times 600$ .

- (c) Part of a thread, showing a spermatozoid in each cell.  $\times 1500$ .

5926

### Schizomycetes (Bacteria).

1. *Micrococcus Crepusculum* Ehrb. Globular bacterium.  $\times 20000$ .
2. *Bacterium Termo* Duj. Rod shaped bacterium. Ferment of putrefaction. One cell isolated dividing into two and one cell fully grown.  $\times 10000$ .
3. *Bacillus subtilis*. Cohn.  
Thread-forming Bacterium of hay-infusion. *a-f*.

(a) Motile state.  $\times 25000$ .

(b) Thread-like form (*Leptothrix*), fully grown, beginning to form spores.  $\times 2500$ .

(c) Free spore.  $\times 25000$ .

(d) Germinating spore.  $\times 25000$ .

(e) Spore after germination.  $\times 25000$ .

(f) New thread grown from the germinated spore.  $\times 2500$ .

4. *Spirillum volutans*, Cohn.  $\times 25000$ .

5. *Spirochaete Ohermeieri*, Cohn. Bacterium of febris recurrens in two different forms.  $\times 10000$ .

*Saccharomyces cerevisiae* Meyen. Blastomycetes (*Saccharomycetes*): Yeast.  $\times 5000$ .

1 & 2. Yeast fermenting below.

3. Yeast fermenting at the surface of liquids.

4. Spores in tetrads in the inner cavity of the mother cell.

5. Spores free ; before germination.
6. Spores germinated and forming young yeast cells.

5928

*Rhizopus nigricans* or *Mucor Stolonifer*, Ehrb. Phycomycetes. Black Mould.

1. Germination of the Spore.  $\times 800$ .
2. Young mycelium grown from a spore.  $\times 800$ .
3. Stolons or runners and rhizoids pushed forth by the mycelium. Above the rhizoids four young sporangia have been produced.  $\times 400$ .
4. Mature sporangium.  $\times 400$ .
5. Mycelium with beginnings of branches for copulation.  $\times 400$ .
6. The copulating branches form end-cells.  $\times 400$ .
7. Copulation and resorption of the separating walls.  $\times 400$ .
8. Zygoted cells rounded and representing the young Zygospor. Suspensors on each side.  $\times 400$ .
9. Ripened Zygospor with the two suspensors.  $\times 400$ .
10. Young sporangium developed from a germinating Zygospor.  $\times 400$ .

5929

*Pencillium glaucum*, Link. Ascomycetes. (*Pencillium Crustaceum* Fries). Common greenish mould.

1. Mycelium with conidiophors ; grown from an ascospore.  $\times 1200$ .
2. Germination of the condiospor.  $\times 1200$ .

3. Ripened ascospore.  $\times 9000$ .
4. First state of the ascogonium.  $\times 3600$ .
5. Formation of the fruit body by the growth of enveloping threads round the ascogonium.  $\times 36$ .
6. Young fruit body, vertically cut. The branching ascogonium in the centre.  $\times 2000$ .
7. Development of the shoots producing asci and mycelial hypha.  $\times 3600$ .
8. Ripening and unripe asci forming chains of spores.  $\times 3600$ .
9. Ripened fruit body, section. Ascospores almost fully evacuated.  $\times 400$ .

5930

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## 2. BRYOPHYTA.

Marchantia polymorpha. Hepaticæ. Common Liverwort. 5931

Brachythecium rutabulum Musci. Capsule of the sporangium. 5932

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## 3. PTERIDOPHYTA.

Equisetum arvense. Equisetacæ: Common horse-tail. 5933

Pteris Serrulata. Filices: Eagle Fern. Sporangium, spores, and archegonium. 5934

*Formation of four cells by tetrad division* of a mother. It is the very common type of the formation of spores and pollen-grains, and gives an idea of certain composed starch-grains as occur in many cases. 5935

*Aspidium Filix mas.* Filices. Worm Fern. Prothallium with antheridia and archegonia.  $\times 50$ . Embryo, developing.  $\times 50$ .

5936

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## B.—PHANEROGAMS.

### 1. GYMNOSPERMÆ. CONIFERÆ.

*Taxus baccata.* Taxineæ. Yew. Male and female cone.  $\times 40$ .

5937

*Juniperus communis.* Cupressineæ. Juniper. Single flower from a male cone ; female flower, with part of the branch and one whirl of leaves.  $\times 90$ .

5938

*Pinus silvestris.* Abietineæ. Common pine.

5939

*Pinus silvestris.* Abietineæ. Germination of pine.  $\times 10$ .

(a) Winged seed. Can be taken to pieces, the embryo is cut in length and can be removed.

(b) and (c) Germinating seeds in two different stages of development.

(d) Young seedling.

5940

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### 2. ANGIOSPERMÆ.

(a) Monocotyledons ( Endogens ).

*Lilium Martagon.* Liliaceæ. Turk's cap. Flower.  $\times 4$ .  
The pistil can be taken to pieces.

5941

*Scilla bifolia.* Liliaceæ. Cross section of the pistil.  $\times 80$   
( In frame under glass ).

5942

*Colchicum autumnale*. Melanthiaceæ. Meadow saffron  
Flower and bulb-tuber.  $\times 2$ . The tuber is verticill.  
cut.

5943

*Galanthus nivalis*. Amaryllidaceæ. Snow-drop.

5944

*Iris germanica*. Iridaceæ. Sword-grass. Flower. It can  
be removed from the sheath of bracts, so that the epigy-  
nic insertion of the perigon can be demonstrated. One of  
the inner leaves of the perigonium can be lifted out to  
show the petaloid lobes of the stigma and the stamens  
covered by the lobes.

5945

*Typha latifolia*. Typhaceæ. Reed-club or reed-mace. Parts  
of the spadix with male and female flowers. Male  $\times 40$ .  
female  $\times 100$ .

5946

*Acorus calamus*. Araceæ. Sweet flag. Solid sector of  
the spadix with one flower intact and one flower in longi-  
tudinal section.  $\times 40$ .

5947

*Carex hirta*. Cyperaceæ. Reed-grass, sedge. Male and  
female flowers.  $\times 18$ .

5948

*Avena sativa*. Gramineæ. Spikelet of oat.  $\times 30$ . Can  
be taken to pieces.

5949

*Hordeum distichum*. Gramineæ. Spike of barley.  $\times 30$ .  
The covering bract of the spikelet in the middle can be  
removed. The ovary of its flower can be lifted out to-  
gether with two stamens. One of the lateral spikelets is  
given in vertical section.

5950

*Poa pratensis*. Gramineæ. Meadow-grass. Spikelet.  $\times 40$ .  
The first flower of the spikelet is divided into two halves,  
one of which can be lifted out.

5951



*Secale cereale*. Gramineæ: Rye. Germination. Longitudinal and cross sections of the lower part of the fruit at the beginning of germination, with the young plant.

(a) Fruit of rye (grain).  $\times 60$ .

After removal of the small fork of wire the model divides into two longitudinal halves, which show the aleuron-layer and the ends-sperm cells stuffed with starch-grains. The removable embryo (also longitudinally cut) shows the extremely tender cells of the scutellum, of the calyptra and coleorhiza. The model is accompanied by a transparent longitudinal section representing the microscopical structure of the embryo. Two removable parts of the seed, adjacent to the external wrinkled testa of the fruit, represent the extremely hard and the pigment-tissue.

5952

*Triticum vulgare*. Gramineæ. Common wheat. Spikelet.  $\times 30$ . Section of the spikelet.  $\times 25$ .

5953

*Zea Mays*. Gramineæ. Maize. Male and female flowers  $\times 25$  and  $\times 40$ .

5954

*Orchis Morio*. Orchidaceæ. Meadow Orchis. Flower.  $\times 8$ .

5955

*Butomus Umbellatus*. Alismaceæ. Flowering rush. Flower.  $\times 12$ .

5956

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#### B.—DICOTYLEDONES.

*Betula alba*. Cupuliferæ. Common birch. Male and female partial inflorescences.  $\times 70$ .

5957

*Alnus glutinosa*. Cupuliferæ. Alder. Partial inflorescences of male and female catkins.  $\times 50$ .

5958

*Fagus silvatica*. Cupuliferæ. Beech. Male flower.  $\times 30$ .  
Group of female flowers.  $\times 10$ . One of the flowers shows  
the cross section of the three cornered fruit.

5959

*Juglans regia*. Juglandaceæ. Walnut. Male and female  
flowers.  $\times 20$  and  $\times 15$  respectively. The female  
flower can be taken apart.

5960

*Salix alba*. Saliaceæ. Willow. Male and female flowers.  
 $\times 13$ .

5961

*Urtica dioica*. Urticaceæ. Nettle. Male and female flowers.  
 $\times 50$ . The female flowers can be taken apart.

5962

*Morus Nigra*. Urticaceæ. Mulberry. Male and female  
flowers, respectively  $\times 30$  and  $\times 25$ . The bracts of the  
female flower can be removed, the fruit can be taken apart.

5963

*Ficus Carica*. Urticaceæ. Fig. One-half of the unripe fruit,  
obtained by vertical section.  $\times 5$ . One of the female  
flowers.  $\times 30$ .

5964

*Humulus Lupulus*. Urticaceæ. Hop. Male and female  
flowers.  $\times 40$ .

5965

*Ulmus Campestris*. Ulmaceæ. Elm. Flower.  $\times 30$ .

5966

*Polygonum Fagopyrum*. Polygonaceæ. Buck-wheat.  
Flower.  $\times 40$ .

5967

*Rumex Acetosella*. Polygonaceæ. Sorrel.

5968

*Chenopodium album*. Chenopodiaceæ. Goose-foot. Flower.  
 $\times 40$ .

5969

*Beta vulgaris* Chenopodiaceæ. Sugar-beet. United cluster of flowers.  $\times 40$ . United cluster of fruits.  $\times 40$ . The upper fruit can be taken to pieces after removal of a small hook.

5970

*Dianthus Caryophyllus*. Caryophyllaceæ. Carnation. Flower.  $\times 4$ . Corolla and pistil can be lifted out.

5971

*Ranunculus acer*. Ranunculaceæ. Crow's-foot. Flower. and syncarpium, respectively  $\times 8$  and  $\times 30$ . The syncarpium is vertically cut.

5972

*Delphinium Consolida*. Ranunculaceæ. Lark spur. Flower.  $\times 12$ . Can be taken apart.

5973

*Aconitum Napellus*. Ranunculaceæ. Common Monk's hood. Flower.  $\times 8$ . The posterior petaloid sepals can be removed.

5974

*Nymphæa alba*. Nymphæaceæ. White Water-lily. Flower.  $\times 6$ .

5975

*Papaver Rhœas*. Papaveraceæ. Poppy. Flower and flower-bud.  $\times 4$ .

5976

*Papaver Rhœas*. Papaveraceæ. Poppy. Capsule, seeds, and section of seed.  $\times 10$ ,  $\times 50$ , and  $\times 100$ . The capsule is cut across.

5977

*Fumaria officinalis*. Fumariaceæ. Fumitory. Flower.  $\times 40$ . Can be taken completely to pieces.

5978

*Brassica Napus*. Cruciferæ. Rape. Flower.  $\times 6$ . The petals can be removed, so that the developing fruit becomes visible.

5979

*Brassica Napus*. Cruciferæ. Rape. Pod (seed vessel).  
 ×6. The two valves breaking loose from the replum  
 allow the grains of seed suspended by their funicles to  
 be seen.

5980

*Viola tricolor*. Violaceæ. Pansy. Flower. ×6. Flower  
 and section of it.

5981

*Drosera rotundifolia*. Droceraceæ. Sun-dew. Leaf. ×20.  
 Leaf with secreting hairs catching an insect.

5982

*Dionæa Muscipula*. Droceraceæ. Fly-trap. Leaf. ×10.

5983

*Sarracenia purpurea*. Sarraceniaceæ. Pitcher-plant. Leaf.  
 ×4.

5984

*Nepenthes destillatoria*. Nepenthaceæ. Indian pitcher-  
 plant. Leaf in natural size, with pot-shaped blade.

5985

*Hypericum perforatum*. Hypericaceæ. St. John's wort.  
 Flower. ×12.

5986

*Hypericum perforatum*. Hypericaceæ. St. John's wort.  
 Cross section through the upper part of the ovary with  
 three partitions. ×80. (In frame under glass).

5987

*Tilia ulmifolia*. Tiliaceæ. Lime. Flower. ×18.

5988

*Malva silvestris*. Malvaceæ. Mallow. Flower and section  
 of the fruit. ×5 and ×15 respectively. The section can  
 be taken apart after removal of a wire.

5989

*Geranium phaeum*. Geraniaceæ. Stork bill. Flower and  
 fruit (schizocarpium). ×10.

5990

*Linum usitatissimum*. Linaceæ. Flax. Flower.  $\times 10$ .

5991

*Linum usitatissimum*. Linaceæ. Flax. Cross section of ovary with five partitions and five spurious dissepiments.  $\times 55$ . (In frame under glass).

5992

*Ruta graveolens*. Rutaceæ. Rue. Flower.  $\times 8$ . One flower tetramerous, another pentamerous; the latter gives an idea of the insertion of the petals, which are not completely represented.

5993

*Æsculus Hippocastanum*. Hippocastanaceæ. Chestnut. Flower.  $\times 15$ .

5994

*Acer campestre*. Aceraceæ. Maple. Male and female flowers.  $\times 15$ .

5995

*Polygala comosa*. Polygalaceæ. Milk wort. Flower.  $\times 50$ . Corolla removable. The labellum and the pistil can be taken out.

5996

*Vitis vinifera*. Vitaceæ. Cultivated grape vine. Hermaphroditic flower of blue Portuguese grape (Oporto grape) with cap-shape corolla.  $\times 45$ . The model can be taken to pieces and then shows the ovules within the ovary.

5997

*Rhamnus Frangula*. Rhamnaceæ. Blackberry-Alder. Flower.  $\times 24$ . The flower can be removed from its stalk and taken apart.

5998

*Euphorbia Cyparissias*. Euphorbiaceæ. Wolf's milk. Cyathium.  $\times 20$ . The inflorescence can be taken out from the cupular involucre.

5999

*Ricinus communis*. Euphorbiaceæ. Palma christi or castor-oil plant. Male flower.  $\times 20$ . For clearness all the stamens are not given.

6000

*Ricinus communis*. Euphorbiaceæ. Palma christi or castor-oil plant. Female flower.  $\times 20$ .

6001

*Conium maculatum*. Umbelliferæ. Cross section through a half-ripened fruit.  $\times 70$ . (In frame under glass).

6002

*Fœniculum capillaceum*. Umbelliferæ. Fennel. Cross section through the ripe fruit.  $\times 70$ . (In frame under glass).

6003

*Cornus mas*. Cornaceæ. Cornelian cherry. Flower.  $\times 30$ .

6004

*Sedum acre*. Crassulaceæ. Wall-pepper. Flower.  $\times 15$ .

6005

*Saxifraga granulata*. Saxifragaceæ. Stone-break. Flower.  $\times 15$ .

6006

*Ribes Grossularia*. Ribesieæ. Gooseberry. Flower.  $\times 15$ .

6007

*Oenothera biennis*. Onagraceæ. Flower.  $\times 15$ . The ovary can be opened.

6008

*Lythium Salicaria*. Lythraceæ. Common loose-strife. Flowers (trimorphic).  $\times 10$ . One flower, long styled. Two other flowers show the tubular calyx in vertical section; one of them represents the short-styled form, the other the intermediate one.

6009

*Daphne Mezereum.* Thymelaeaceæ. Mezereon spurge-laurel.  
Flower.  $\times 4$ . One entire and one half flower.

6010

*Pirus malus.* Pomææ. Flower of apple.  $\times 5$ . The flower  
can be removed from its pedicel and then taken to pieces.

6011

*Rosa canina.* Rosaceæ. Wild Rose. Flower with hypan-  
thium divided.  $\times 9$ .

6012

*Potentilla tormentilla.* Tormentil. Flower.  $\times 25$ .

6013

*Prunus Cerasus.* Prunææ. Cherry-flower.  $\times 7$  The flower  
can be taken from its pedicel and taken to pieces. The  
section of the pistil is given on larger scale.

6014

*Pisum sativum.* Papilionaceæ. Pea. Flower.  $\times 8$ . Vexil-  
lum, alac, and carina can be removed, then the free stamen  
and pistil.

6015

*Pisum Sativum.* Papilionaceæ. Pea. Cross-section of the  
unicarpellary ovary.  $\times 40$ . (In frame under glass).

6016

*Pisum Sativum.* Papilionaceæ. Pea. Legumen.  $\times 4$ .  
The two valves can be lifted out after removal of a small  
wire hook, showing the young peas fastened inside, one  
of which is cut in order to show the embryo with its pri-  
mary root and plumula.

6017

*Trifolium pratense.* Papilionaceæ. Clover. Flower.  $\times 25$ .  
The model can be taken completely to pieces.

6018

*Aristolochia Sipho.* Aristolochiaceæ. Pipe-tree. Flower.  
 $\times 8$ . A piece of the wall of the corollar-tube can be  
removed. The gynandrous column can be lifted out.

6019



- Viscum album*. Loranthaceæ. Mistletoe. 6020
- Vaccinium Vitis Idæa*. Ericaceæ. Cowberry. Flower.  
×40. Can be taken apart. 6021
- Primula officinalis*. Primulaceæ. Primrose. Flower. ×15.  
Short-styled and long-styled form, the former in vertical  
section. The corolla of the latter can be lifted out. 6022
- Syringa vulgaris*. Oleaceæ. Lilac. ×14. The corolla  
can be lifted out. 6023
- Gentiana asclepiadea*. Gentianaceæ. Gentian. Flower. ×5.  
Corolla and pistil can be lifted out. 6024
- Asclepias Cornuti*. Asclepiadaceæ. Silk weed. Flower.  
×9. The corolla can be lifted out. The generative or-  
gans can be taken to pieces. 6025
- Calystegia sepium*. Convolvulaceæ. Hedge-bell. Flower.  
×50. The corolla can be removed. 6026
- Cuscuta Trifolii*. Cuscutæ. Dodder. 6027
- Symphytum officinale*. Asperifoliæ. Common comfrey.  
Flower. ×15. The corolla can be lifted out and is di-  
vided into two halves to show the insertion of the stamens  
and the characteristic appendages. 6028
- Hyoscyamus niger*. Solanaceæ. Henbane. Cross-section  
of the dimerous pistil. ×57. (In frame under glass). 6029
- Solanum tuberosum*. Solanaceæ. Potato flower. ×10.  
Two stamens and the pistil can be lifted out. The pistil  
is divided into halves. 6030

*Atropa Belladonna.* Solanaceæ. Deadly nightshade. Flower.  
 ×5. The corolla can be lifted out. The pistil is divided  
 into two halves to show the ovulus inside.

6031

*Linaria vulgaris.* Scrophulariaceæ. Common toad-flax.  
 Flower. ×12. The inferior labellum with spur can be  
 lifted out.

6032

*Salvia officinalis.* Labiatae. Sage. Flower. ×15. The  
 corolla can be lifted out, and is divided into two longitudinal  
 halves,

6033

*Utricularia vulgaris.* Lentibulariaceæ. Hooded water-  
 milfoil. Part of the leaf with a digestive bladder. ×40.

6034

*Cucumis sativus.* Cucurbitaceæ. Common cucumber.  
 Male flower. ×5.

6035

*Cucumis sativus.* Cucurbitaceæ. Common cucumber. Fe-  
 male flower. ×5. The lower part of the fun-shaped  
 corolla can be removed, so that the inner organs can be  
 seen. The structure of the ovary is also shown in a trans-  
 versal section.

6036

*Asperula odorata.* Rubiaceæ. Wood-ruff. Flower. ×40.

6037

*Lonicera caprifolium.* Caprifoliaceæ. Honey-suckle. Flower.  
 ×5. The corolla can be removed and the style must be  
 unscrewed before.

6038

*Valeriana officinalis.* Valerianaceæ. Valerian. Flower.  
 ×15. Flower with section of the pistil.

6039

*Succisa pratensis.* Dipsaceæ. Devil's bit. Flower. ×15.  
 Corolla and pistil can be lifted out.

6040

*Anthemis Cotula*. Compositæ. Mayweed, wild chamomile. Anthodium vertically cut, with a marginal lingulate and a tubular flower of the disc. Respectively  $\times 8$  and  $\times 24$ .

6041

*Taraxacum vulgare*. Compositæ. Dandelion. Anthodium in vertical section with a lingulate flower and a fruit with stalked pappus. Respectively  $\times 8$  and  $\times 16$ .

6042

*Centaurea Cyanus*. Compositæ. Corn flour. Anthodium.  $\times 10$ . Besides the anthodium the model gives one of the hermaphrodite flowers on larger scale in vertical section.

6043

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## LONG CASE No. DCLXI.

### *Sections of principal Trees found in the Jeypore State, Rajputana.*

*Diospyros melanoxylon*. Ebenaceæ. Tendu. Abnus. The tree is of the moderate size, and is found all over India. It is common on the hills throughout the State. The ebony largely employed in fancy works and carving is found in the centre, and the wood is generally used for buildings, poles, and shafts.

6044

*Dendrocalamus strictus*. Gramineæ. The male Bamboo. Bans. It is found in several parts of India, and is common in the south, but rare in the north of Jeypore. It is used for a variety of purposes in building, furniture, and basket work.

6045

*Disospyros montana*. Ebenaceæ. Bis-Tendu, Lohari. Found in most parts of India, and the durable wood of the tree is generally used for making articles of furniture. It is small in size and grows only in south of the State.

6046

*Albizzia procera*. Leguminosæ. Safed Siris. It is found throughout the Sub-Himalayan tract and is extensively employed for making implements required for agriculture and domestic purposes.

6047

*Briedelia retusa*. Euphorbiacæ. Karjara, Khaja, Lamkana. It is found only in the south of the Jeypore State and is common throughout the Sub-Himalayan tract. It is used for building purposes, carts, and agricultural requisites.

6048

*Acacia catechu*. Leguminosæ. Catechu, Cutch. Khair. The tree grows in most parts of India, and is common in the south of the Jeypore State. The hard and durable wood is used for making agricultural implements, handles for arms and bows.

6049

*Eugenia Jambolana*. Myrtacæ. Jaman. The tree grows wild all over India, and is found in the south of the Jeypore State. It stands well under water, and is used for well-work, agricultural implements, building, and carts.

6050

*Bombax malabaricum*. Malvacæ. Silk-Cotton-Tree. Semal. The tree is found throughout India, and is commonly met with in the hills of the State. The wood is not durable, but it can fairly resist the action of water and is used for lining wells and making fishing-floats. Packing boxes and other articles of furniture are also made of that.

6051

*Bombax malabaricum*. Malvacæ. Silk-Cotton-Tree. Semal. The tree is found throughout India, and is commonly met with in the hills of the State. The wood is not durable, but it can fairly resist the action of water and is used for lining wells and making fishing-floats. Packing boxes and other articles of furniture are also made of that.

6052

*Acacia Farnesiana*. Leguminosæ. Vilayati Kikar, Guya Babula. The tree is a native of America, but is now grown all over India and is also cultivated in the State.

6053

*Ulmus integrifolia*. Urticacæ. Chhillar, Papri, Chibil. Kandru. The tree is large and is found throughout the Sub-Himalayan tract, Central and South India. It is also very much common in the north of the State, and the wood, which is not very hard, is employed for carts, carving, and building.

6054

*Flacourtia Ramontchi*. Bixinæ. Katar, Kaknia, Kangoni. The small tree is very common in the dry hills of India and is also found in the State. The hard and durable wood is used for turnery and making agricultural implements.

6055

*Briedelia retusa*. Euphorbiacæ. Karjara, Khaja, Lamkana. It is found only in the south of the Jeypore State and is common throughout the Sub-Himalayan tract. It is used for building purposes, carts, and agricultural requisites.

6056

*Albizza odoratissima*. Leguminosæ. Siris. The large tree is met with in most parts of India, but is not common in the forests of Jeypore. The durable and hard wood is employed for making articles of furniture, wheels, and oil-mills.

6057

*Cassia Fistula*. Leguminosæ. The Indian Laburnum. Amaltas. (Kirmalia.) The tree is small and is found all over India and throughout the State. Its wood is durable and well suited for manufacturing carts, posts, and agricultural implements.

6058

*Tecoma undulata*. Bigoniacæ. Rohira. The tree is small and is found in the Sulaiman and Salt Ranges, the Punjab plains, Rajputana, and Guzerat, but is not very

common in the State. Its strong and durable wood is admirably adapted for carving, furniture, and agricultural implements.

6059

*Limonia acidissima*. Rutaceæ. Bharassi (Miri) Beli. A small tree, met with in the dry hills of India, and is commonly found throughout the State. Its wood is very hard, and may do well for turning purposes.

6060

*Saccopetalum tomentosum*. Anonaceæ. Umb ; Kirna. A large tree found in several parts of India, but grows only in the southern part of the State. Its wood is smooth and moderately hard.

6061

*Dalbergia latifolia*. Leguminosæ. The Blackwood or Rosewood of Southern India. Huldia, Shisham. A large tree which grows to a very great height in Southern India and is also to be met with in other parts of India. It is found only in the south of the State. Its wood is highly prized for all kinds of furniture, carving, and fancy work, carts, and agricultural implements and for handles of knives, &c.

6062

*Tecoma undulata*. Bigoniaceæ. Rohira. The tree is small and is found in the Sulaiman and Salt Ranges, the Punjab plains, Rajputana, and Guzerat, but is not very common in the State. Its strong and durable wood is admirably adapted for carving, furniture, and agricultural implements.

6063

*Dalbergia lanceolaria*. Leguminosæ. Bindi, Takoli. The tree is found in the Sub-Himalayan tract and Central and South India. Its wood is not durable, and is only moderately hard.

6064

*Bauhinia racemosa*. Leguminosæ. Saintha ; Thaur. A small tree found in most parts of India, as well as in the State. Its wood is good but is not commonly used.

6065



*Acacia Suma*. Leguminosæ. Safed Khairi, Dhoulā Khejra. The tree is of the medium size, and is found in several parts of India and is common throughout the State. Its wood is very fine.

6066

*Acacia leucophloea*. Leguminosæ. Rainj, Rounj, Arinj. The tree, which is large as well as of moderate size, is found in most parts of India and grows near Jeypore. The strong and tough wood is good for making furniture.

6067

*Wrightia tinctoria*. Apocynaceæ. Khirni. The tree is cultivated throughout the State and is found in other parts of Rajputana as well as in Central and South India. Its moderately hard wood is well suited for carving and turning.

6068

*Holarrhena antidysenterica*. Apocynaceæ. Karru, Kura. The tree is to be met with in the south of the State only, and is found in the Sub-Himalayan tract, in Oudh, Bengal, Central and South India. Its wood is very soft, and is extensively employed for furniture, carving, and turning.

6069

*Acacia Arabica*. Leguminosæ. Babul, Kikar. The tree is common all over the State and other parts of Rajputana. It grows well in sandy soil, and is found throughout the plains of India. Its wood is hard, and is largely used for carts, agricultural requisites, tool handles, boats, and sometimes for railway sleepers.

6070

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A series of models (twenty) Nos. 6071-90, to show the most practical modes of reproducing different kinds of woody plants; prepared under the instruction of Mons. Balter, Horticulturist of Troyes, France.

Each graft is made movable by unfastening the ligature or cord, the section of wood in the graft and the stock can be studied.



Grafting is uniting a scion of one plant to the root, branch, or stem of another. The scion and stock must be of nearly related species.

1. Simple slip of Vine to show budding or swelling of the graft.
2. Saddle grafting. This mode of grafting was invented by Mr. Knight, and is employed where the stock is of moderate dimensions. Two sloping cuts are made in the end of the scion and thus a deep cleft is made in it, and the stock is cut wedge-shaped to fit it, upon which the scion is placed saddlewise.

It is very advantageous, as it affords the largest surface for the union of the scion and the stock.

3. Splice-grafting. This operation is performed by making sloping cuts in the ends of the scion and stock in opposite directions. The sections, thus produced, are of the same shape. They are afterwards united so that the one cut surface exactly fits the other, and are secured by matting or otherwise. The operation is attended with more certainty when the incisions are so shaped that the inner bark of the one may fit the inner bark of the other.
4. Whip or Tongue grafting is almost the same as Splice grafting, except that a cleft or slit is made in the end of both scion and stock, in the direction of the grain and in the middle of the sloping surface, forming a kind of tongue, so that, when put together, the tongue of each is inserted in the slit of the other. This is the most expeditious and certain mode of grafting when applied to young trees, whose stocks are not much more in diameter than the scion.
5. Splice-grafting. This operation is performed by making sloping cuts in the ends of the scion and stock in opposite directions. The sections, thus produced, are of the same shape. They are afterwards united so that the one cut surface exactly fits the other and are secured by matting or otherwise. The operation is attended with more certainty when the incisions are so shaped that the inner bark of the one may fit the inner bark of the other.

6. Side-grafting. Simple. It is only a modification of whip or splice grafting, and is performed on a stock whose head is not cut off, or on a branch without its being shortened.

It is a mode of grafting in which the scion, cut quite across very obliquely, so as to give it the form of a slender wedge, is thrust down inside of the bark of the stock or stem into which it is inserted ; the cut side of the scion being next the wood of the stock.

7. Shield-budding. It is performed by making a transverse cut in the shoot containing the bud, a little below an eye ; and this transverse cut is met by a longer incision downwards, commencing a little above the eye, taking great care that a portion of the wood is removed with the bark in which the bud is situated.

The bark of the stock is cut in manner resembling an inverted T, the greatest care should, however, be taken that the edges of both the cuts in the stock and bud be cut clean, so that they form a speedy and uniform union.

8. Shoulder or Chink grafting. This process is performed when the stock and scion are equal in size, and that offers an opportunity of gaining the advantage of an extra amount of alburnous union.
9. Crown grafting or Rind grafting. It is a method in which the alburnum and inner bark are separated, and between them is inserted the lower end of the scion cut slantwise. It is merely a variety of cleft grafting.
10. Whip or Tongue grafting in the English manner. Simple.
11. Whip or Tongue grafting in the French manner. Simple.
12. Whip or Tongue grafting in the French manner. Double.
13. Whip or Tongue grafting. Double.

14. Crown grafting or Rind grafting. A variety of cleft grafting. Double.
15. Crown grafting or Rind grafting. A variety of cleft grafting. Simple.
16. Chink grafting or Shoulder grafting. Simple.
17. Mr. Paul's method of Sheild-budding.
18. Saddle grafting invented by Mr. Knight, and used by him chiefly upon cherry trees.
19. Grafting of orange by incrustation.
20. Grafting by Approach or Inarching in which the spring or shoot of one tree is ingrafted into another without cutting it from the parent stock.

Devastation done on Dhak wood, found in the Madhopore forests by *Scolibdiae*, Suborder of Tetranura (Farri. 4 jointed) of the order of Coleoptera (sheathed wings). Presented by Lala Shiva Bakhsh, Superintendent of Forests, Jeypore State.

6091

The double Cocoa-nut or Coco-de-mer from the Sechelles Islands. The half of it is often used as an alms-bowl by religious beggars. Presented by H. H. the Maharajah of Jeypore, G.C.S.I., &c., &c.

6092

Gourd. *Kaddu*. Model in clay. Lucknow.

6093

Pumpkin. *Kaddu*. Model in clay. Lucknow.

6094

Bowl, wood. Such bowls are used by devotees.

6095

Gourd fruit, cut to hold water for a Fakir, coloured. *Toombi*.

6096

- A bunch of fruits. Model in clay. Trichinopoly. 6097
- Bunch of pomegranates. *Anar*. Model in clay. Trichinopoly. 6098
- Bunch of plantains. *Kela*. Clay. Trichinopoly. 6099
- Pumpkin. *Kaddu*. Clay. Trichinopoly. 6100
- 6101
- Brazilian Sugar Squash. *Cucurbita Pepo*. *Kaddu*. Ornamental. Clay. Trichinopoly. 6102
- Natagonian Squash. *Cucurbita Pepo*. *Kaddu*. Ornamental. 6103
- Cucurbita Citrullus*. Watermelon. *Tarbooz* or *Matira*. Clay. Maker—Girdhari, Lucknow, Oudh. 6104
- Pumpkin. *Petha*. Clay. Lucknow. 6105
- Gourd. *Toomba*. Clay. Trichinopoly. 6106
- Melon. *Kharbooza*. Clay. 6107
- Melon. *Kharbooza*. Clay. 6108
- Cauliflower. *Phool gobhi*. Clay. Maker—Girdhari, Lucknow, Oudh. 6109

- Brassica oleracea. Cabbage. *Pan Gobhi*. Clay. Maker—  
Girdhari, Lucknow, Oudh. 6110
- Long white Buck marrow squash, Cucurbita Pepo. Orna-  
mental. *Kaddu*. Clay. Trichinopoly. 6111
- Pumpkin, large, green, Spanish. Cucurbita Pepo. *Kaddu*.  
Clay. Trichinopoly. 6112
- Rouge de Crimea. Cucurbita Pepo. *kaddu*. Ornamental.  
Clay. Trichinopoly. 6113
- Jack fruit, *kathal*. Clay. Trichinopoly. 6114
- Jack fruit, *kathal*. Clay. Trichinopoly. 6115
- Squash Valparaiso. Cucurbita Pepo. Ornamental. *Kaddu*.  
Clay. 6116
- Cucurbita Melanosperma. This is a variety of C. facifolia.  
A. Br. Bouche. *Matira*. Ornamental. Clay. 6117
- Chestnut squash. Cucurbita Pepo. Ornamental. *Kaddu*.  
Clay. 6118
- Pumpkin, large, green. Cucurbita Pepo. Ornamental.  
*Kaddu*. Clay. 6119
- Squash Hubbard. Cucurbita Pepo. Ornamental. *Kaddu*.  
Clay. 6120
- Golden-yellow Bush Custan. Cucurbita Pepo. Ornamental.  
*Kaddu*. Clay. 6121

Fruit. Clay. Trichinopoly.

6122

Spikelet of wheat, (*Triticum aestivum*), showing—

- (1) the glumes ;
- (2) the glumules ;
- (3) the ovary and two styles with their stigmas ;
- (4) the stamens ;
- (5) the nectarial glands, before and after fecundation.

6123

A grain of wheat, 30 times the natural size, showing its formation and the commencing development of the young plant.

6124

Lily (*Lilium* L.) Complete flower.

6125

Melon (*Cucumis melo*, L.), complete female flower, with sections of the ovary showing the arrangement of the carpels and ovules.

6126

Melon (*Cucumis melo*, L.), complete male flower.

6127

Strawberry, cut vertically, to show the development of receptacle, and the numerous seeds or achenes enclosed in its parenchyma.

6128

Mulberry (*Morus nigra*, L.), vertical section, showing several single berries, surrounded by their floral envelopes changed to succulent ones, constituting a berry called Sorose. *Shahtoot*.

6129

Campanula (*Campanula rapunculus*), complete flower.

6130

Belladonna (*Atropa Belladonna*, L.), complete flower.

6131

Gooseberry (berry of the *ribes uvar crispa*, L.), vertical section, showing the arrangement of its envelopes, parenchyma and seeds.

6132

Cherry, ripe, showing the different layers of the pericarp, the ovule, and its envelopes.

6133

Acorn.

6134

6135

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## MODELS OF MUSHROOMS.

Bulbous agaric. Dangerous, if eaten.

6136

False orange agaric. Poisonous, if eaten.

6137

Ruby ball. Doubtful.

6138

Zoned agaric. Doubtful.

6139

Yellow moril. Edible.

6140

Colobine agaric. Edible.

6141

Black moril. Edible.

6142

Moril impudicus. Doubtful.

6143



*Chrysanthemum cornarium*. Model (magnified) of a composite flower. Half of the flower cut to show the insertion of the florets of the ray and the disk to the ligulate (tongue-like) corolla.

6144

Floret of the Marguerite; *i. e.*, (composite flower) opening to display the stamens and the interior of the ovary.

6145

Sweet Pea (*Pisum sativum*), magnified. The corolla is movable in order to show the keel, standard, and wings; the stamens which are united at the base can be raised to display the pistil, which can also be divided to show the ovules.

6146

Flower of the Potato (*Solanum Tuberosum*). The corolla can be separated as well as the stamens. The pistil divides into two to show the arrangement of the ovules in the ovary. *Alu.*

6147

A Portfolio containing dried specimens of plants folded between sheets of papers. Emile Deyrolle, Paris.

6148

The Iris (*Iris Germanica*). All the parts of the perianth can be lifted up, one by one, as well as the stamens and the pistils, leaving only the base, upon which is found a section of the ovary showing the ovule in its proper position.

6149

The Vine flower (*Vitis vinifera*). The calyx can be taken off to show the peculiar delinescence, the stamens are movable, and the ovary is cut, and thus permits the ovules to be seen.

6150

A book, containing very thin sections of fifty Indian woods. Prepared by Forstrat Professor Dr. Nordlinger. For the use of students at the Dehra Dun Forest School.

6151

*Contents of the Drawers, Case Nos. 661 and 659.  
Collection of Elements and Minerals (Nos. 6152 to  
6181) arranged to illustrate "First Lessons on  
Minerals."*

BY ELLEN H. RICHARDS.

Boston Society of Natural History Science Guide No. XIII.

1. Copper. Artificial.
2. Lead. Artificial.
3. Zinc. Artificial.
4. Iron. Artificial.
5. Sulphur. Artificial.
6. Graphite. Ceylon.
7. Limonite. Richmond, Mass.
8. Hematite. Marquette, Mich.
9. Magnetite. Port Henry, N. Y.
10. Quartz. Branchville, Conn.
11. Quartz, Flint. Dover, England.
12. Pyrite. Charlemount, Mass.
13. Galenite. Missouri.
14. Halite, (Rock Salt). Cheshire, England.
15. Calcite. Rockland, Mass.
16. Calcite (Chalk). Dover, England.
17. Gypsum, Selenite. Nova Scotia.
18. Feldspar, Orthoclase. Branchville, Conn.
19. Mica, Muscovite. Groton, N. H.
20. Hornblende. Chester, Mass.
21. Sandstone, showing Quartz. Branchville, Conn.
22. Granite, showing Quartz and Feldspar. Rockport,  
Mass.
23. Calcite, shells. Florida, Etc.

24. Calcite, Coral. Florida.
  25. Limestone, fossiliferous. Rochester, N. Y.
  26. Limestone, Marble. Rutland, Vt., Etc.
  27. Gypsum, massive. Nova Scotia.
  28. Feldspar, Albite. Branchville, Conn.
  29. Serpentine. Rowe, Mass.
  30. Chlorite. Rowe, Mass.
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*List of Specimens of Lithological Collections  
(Nos. 6182 to 6331) arranged to illustrate  
"Common Minerals and Rocks."*

1. Daibase. Somerville, Mass.
2. Diabase, weathered. Boston, Mass.
3. Daibase, disintegrated. Somerville, Mass.
4. Diabase, disintegrated. Brighton, Mass.
5. Felsite, angular fragment. Marblehead, Mass.
6. Felsite, subangular fragment. Marblehead, Mass.
7. Felsite, rounded pebble. Marblehead, Mass.
8. Peat. Boston, Mass.
9. Graphite. Ceylon.
10. Pyrite. Charlemont, Mass.
11. Halite, Rock-salt. Cheshire, England.
12. Limonite. Kent, Conn.
13. Hematite. Marquette, Mich.
14. Magnetite. Port Henry, N. Y.
15. Quartz, vitreous. Branchville, Conn.
16. Quartz, Flint. Dover, England.
17. Gypsum, Selenite. Nova Scotia.
18. Calcite. Canada.
19. Dolomite. Westchester Co., New York.
20. Hornblende. Chester, Mass.

21. Muscovite. Groton, N. H.
22. Orthoclase. Branchville, Conn.
23. Plagioclase, Labradorite. Labrador.
24. Kaolinite, Clay. New Jersey.
25. Serpentine. Lynnfield, Mass.
26. Chlorite. Rowe, Mass.
27. Glauconite, Greensand. New Jersey.
28. Gravel. Marblehead, Mass.
29. Conglomerate, Pudding-stone. Roxbury, Mass.
30. Sand. Nantasket, Mass.
31. Sandstone, Freestone. New Brunswick.
32. Sandstone, ferruginous. Portland Conn.
33. Quartzite. N. Adams, Mass.
34. Slate. Somerville.
35. Slate, Roofing Slate. N. Y. and Vt.
36. Gypsum. Nova Scotia.
37. Limestone, Coquina. St. Augustine, Fla.
38. Limestone, fossiliferous. Rochester, N. Y.
39. Limestone, Chalk. Dover, England.
40. Limestone, crystalline. West Rutland, Vt.
41. Gneiss, micaceous. Northfield, Mass.
42. Petrosilex, banded. Marblehead, Mass.
43. Mica Schist. Fitchburg, Mass.
44. Granite, micaceous. Fitchburg, Mass.
45. Granite, hornblendic. Rockport, Mass.
46. Diabase, compact Trap. Somerville, Mass.
47. Obsidian. Lipari Islands.
48. Obsidian, vesicular, Pumice. Lipari Islands.
49. Basalt, vesicular, Lava. Mt. Vesuvius, Italy
50. Melaphyr, amygdaloidal. Brighton, Mass.
51. Hematite, specular. Pennsylvania.
52. Apatite. Canada.

53. Siderite. Newburyport, Mass.
54. Hornblende, bladed. Chester, Mass.
55. Biotite. Canada.
56. Albite. Branchville, Conn.
57. Beryl. Groton, N. H.
58. Talc. Florida, Mass.
59. Conglomerate, Breccia. Point of Rocks, Md.
60. Slate, arenaceous, Flag-stone. Hudson River, N. Y.
61. Shale. Newton Cen. Mass.
62. Tripolite, infusorial Earth. Pope's Creek, Md.
63. Limestone, compact. Buffalo, N. Y.
64. Quartz, fossil wood. Colorado.
65. Phosphate Rock, fossil Guano. Charleston, S. C.
66. Norite. Westport, N. Y.
67. Mica Schist, garnetiferous. Hoosac Tun'l, Mass.
68. Mica Schist, argillaceous. Lancaster, Mass.
69. Hydramica Schist. Florida, Mass.
70. Hornblende Schist. Chester, Mass.
71. Talc Schist, Soapstone. Vermont.
72. Petrosilex, red and compact. Hyde Park, Mass.
73. Petrosilex, Quartz-porphry. Marblehead, Mass.
74. Granite, red. New Brunswick.
75. Syenite, eruptive. Marblehead, Mass.
76. Diorite, eruptive. Marblehead, Mass.
77. Greenstone. Boston, Mass.
78. Obsidian, banded. Lipari Islands.
79. Trachyte. Drachenfels, Ger.
80. Vein Granite. Fitchburg, Mass.
81. Fluorite. New York.
82. Magnesite. Greece.
83. Pyroxene. New York.
84. Chrysolite. Val le Bains, Fr.

85. Garnet. New Hampshire.
86. Nephelite. Litchfield, Me.
87. Staurolite. Lisbon, N. H.
88. Epidote. Warwick, Mass.
89. Sand, Garnet and Magnetite. Marblehead, Mass.
90. Sandstone, fossiliferous. St. Mary's, Md.
91. Slate siliceous. Braintree, Mass.
92. Slate, carbonaceous. Pennsylvania.
93. Porcelainite, baked Slate. Nantasket, Mass.
94. Hematite, fossiliferous. Clinton, N. Y.
95. Magnetite porphyritic. Cumberland, R. I.
96. Buhrstone. Paris, France.
97. Limestone, lithographic. Solenhofen, Bavaria.
98. Limestone, crystal, and fossilif. Catskill, N. Y.
99. Limestone, hydraulic. Buffalo, N. Y.
100. Limestone, Marbles. Tennessee, etc.
101. Limestone, Oölite. Humboldt Co., Ia.
102. Limestone, Calcareous Tufa. Vermont.
103. Limestone, serpentinic. Port Henry, N. Y.
104. Dolomite, variegated. Winooski, Vt.
105. Dolomite. Bolton, Mass.
106. Dolomite, Pearlspar. Lockport, N. Y.
107. Rose Quartz. Middletown, Conn.
108. Mica Schist, Quartzose. Chester, Mass.
109. Slate and Sandstone. Brighton, Mass.
110. Diorite, stratified. Chester, Mass.
111. Conglomerate. Greenfield, Mass.
112. Mica Schist, staurolitic. Chesterfield, Mass.
113. Mica Schist, Chialstolite Slate. Lancaster, Mass.
114. Petrosilex porphyritic. Malden, Mass.
115. Felsite, porphyritic. Marblehead, Mass.
116. Felsite, banded. Milton, Mass.

117. Granite, binary. Dedham, Mass.
118. Diabase, coarse. Nahant, Mass.
119. Rhyolite. Berkum, Ger.
120. Obsidian, Spherulite. Lipari Islands.
121. Obsidian, Pitchstone.. Lipari Islands.
122. Basalt, containing Leucite. Mt. Vesuvius. Italy.
123. Basalt, chrysolitic. Sandwich Islands.
124. Volcanic Tuff. Naples.
125. Melaphyr, brecciated. Nantasket, Mass.
126. Galenite. Galena, Ill.
127. Chalcedony. Tampa Bay, Fla.
128. Asbestus. Virginia.
129. Chrysolite. Canada East.
130. Sandstone, ferruginous. New Jersey.
131. Sandstone, concretionary. Salina, Kansas.
132. Sandstone, Arkose. Milton, Mass.
133. Quartzite, micaceous. Blackstone, Mass.
134. Slate, metamorphic. Harvard, Mass.
135. Shale, micaceous. Turner's Falls, Mass.
136. Siliceous Tufa. Yellow Stone Park.
137. Hematite, jaspery. Marquette, Mich.
138. Dolomite, compact. Stoneham, Mass.
139. Dolomite, with Tremolite. Lee, Mass.
140. Gneiss, granitoid. Port Henry, N. Y.
141. Gneiss, coarse. Worcester, Mass.
142. Gneiss, highly micaceous. Monson, Mass.
143. Porphyritic Granite. Winchester, Mass.
144. Granite, micaceous. Braggville, Mass.
145. Diabase, porphyritic. Nantasket, Mass.
146. Diabase, chrysolitic. Lewiston, Me.
147. Trachyte. Marblehead, Mass.
148. Volcanic Tuff. Brighton, Mass.



149. Andesite. Colorado.  
150. Melaphyr, cupriferous. Calumet, Mich.
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*Specimens of Minerals and Rocks.*

Nos. 6332 to 6765

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MINERALS.

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DIVISION I.

1. METALLIC—

1. Bornite.
  2. Gold in quartz.
  3. Ruby silver.
  4. Bismuth.
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NON-METALLIC—

5. Sulphur.
  6. Sulphur (artificial).
  7. Graphite.
- 

DIVISION II.

*The Compounds of Metals with elements of the  
Arsenic and Sulphur groups.*

1. ARSENIDES, &c.—

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2. SULPHIDES—

8. Blende.
9. Quartz with blende.
10. Chalcocite.
11. Galena.
12. Pyrite in slate.

13. Pyrite with lepidolite.
  14. Marcasite.
  15. Molybdenite.
  16. Barite and galena.
  17. Blende and brown-spar.
  18. Galena and quartz.
  19. Fluorite, galena, and pyrite.
  20. Galena on quartz.
  21. Galena and quartz.
  22. Fahlerz, gray copper, and Tetrache copper-glance.
- 

### 3. ARSENO SULPHIDES.

23. Native Arsenic.
- 

### 4. SULPHUR-SALTS—

24. Magnetite and chalcopyrite.
  25. Brittle sulphuret of silver.
  26. Celestine and sulphur.
  27. Chalcopyrite.
  28. Chalcopyrite in quartose gangue.
  29. Chalcopyrite and quartz
  30. Chalcopyrite, galena, and calcspar.
  31. Chalcopyrite.
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## DIVISION III.

*The Compounds of Metals with elements of the  
Chlorine group.*

### 1. SIMPLE CHLORIDES —

32. Fluorite.
33. Salt.

## DIVISION IV.

*The Compounds of Oxygen.*

## SECTION 1.—OXIDES —

34. Atacamite.
35. Zincite and franklinite.
36. Magnetite and pyrite.
37. Magnetite.
38. Chromite.
39. Uranite.
40. Hematite.
41. Micaceous hematite.
42. Specular iron.
43. Specular iron and quartz.
44. Earthy hematite.
45. Oolitic hematite.
46. Limonite.
47. Limonite pseudomorphous after siderite.
48. Limonietic veinstone.
49. Psilomelane.
50. Wad.
51. Cassiterite.
52. Silicified wood.
53. Vein quartz.
54. Vein rock chiefly quartz.
55. Vein quartz with upper pyrites.
56. Rock crystal.
57. Rock crystal containing &c., &c.
58. Amethyst.

59. Quartz.
  60. Manganites.
  61. Manganesian garnet.
  62. Quartzite.
  63. Quartz porphyry.
  64. Quartz schist.
  65. Quartzitic sandstone.
  66. Smoky quartz.
  67. Flint.
  68. Jasper.
  69. Jasper and hematite.
  70. Chalcedony.
  71. Chalcedony and quartz.
  72. Brecciated chert.
  73. Agate.
  74. Carnelian.
  75. Hyalite.
  76. Opal.
  77. Quartz and limonite.
  78. Quartz with galena.
  79. Micaceous hematite.
  80. Ochreous hematite.
- 

## SECTION 2.—OXYGEN SALTS.

### (a) *Carbonates* —

81. Aragonite.
82. Azurite.
83. Witherite.
84. Strontianite.
85. Cerussite.

- 86. Calcite, &c.
  - 87. Calcite.
  - 88. Calc-tufa.
  - 89. Travertine.
  - 90. Calc spar.
  - 91. Calcite and pyrite.
  - 92. Iceland-spar.
  - 93. Stalactites.
  - 94. Dolomite.
  - 95. Dolomite crystals in talcose schist.
  - 96. Clay iron-stone.
  - 97. Calamine.
  - 98. Baryto-calcite.
  - 99. Malachite.
  - 100. Galena in calcite.
  - 101. Nodular clay iron-stone.
  - 102. Stibnite.
  - 103. Yenite lieonite (iron ore.)
- 

**(b) *Silicates.***

- 104. Chlorite.
- 105. Olivine.
- 106. Chrysolite in serpentine.
- 107. Chondrodite in crystalline limestone.
- 108. Bronzite.
- 109. Augite.
- 110. Actinolite.
- 111. Cocolite.
- 112. Tremolite.
- 113. Elacolite, felspar, and hornblende.
- 114. Hornblende.

115. Hornblende and epidote.
116. Asbestos in quartz.
117. Jade.
118. Jade or axstone.
119. Talc.
120. Soapstone.
121. Steatite.
122. Serpentine.
123. Chrysocolla.
124. Andalusite.
125. Chiastolite in slate.
126. Beryl in granite.
127. Staurolite.
128. Kyanite.
129. Garnet.
130. Eder garnet.
131. Garnet cocolite.
132. Colophonite.
133. Pyrope in serpentine.
134. Idocrase.
135. Idocrase, Vesuvian.
136. Idocrase, mica, &c.
137. Scapolite and hornblende.
138. Scapolite.
139. Epidote.
140. Epidote with garnet cocolite.
141. Mica.
142. Felspar. Twin crystals of orthoclase.
143. Orthoclase.
144. Orthoclase in trachyte.
145. Felspar and hornblende.
146. Albite.

- 147. Labradorite.
  - 148. Kaolin.
  - 149. Zeolite.
  - 150. Zeolite stilbite.
  - 151. Prehnite.
  - 152. Natrolite.
  - 153. Analcime.
  - 154. Harmotome.
  - 155. Harmotome on calcite.
  - 156. Stilbite.
  - 157. Stilbite and calcite.
  - 158. Henlandite.
  - 159. Tourmaline.
  - 160. Schorl granite.
  - 161. Schorl.
  - 162. Schorl and quartz.
  - 163. Lapislazuli.
  - 164. Sphene in syenite.
- 

(c) MOLYBDATES AND TUNGSTATES —

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(d) CHROMATES AND SULPHATES —

- 165. Barite.
  - 166. Gypsum.
  - 167. Fibrous gypsum.
  - 168. Alabaster.
  - 169. Selenite.
  - 170. Alum.
- 

(e) BORATES —

- 171. Wavellite.



(f) NITRATES —

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(g) PHOSPHATES, ARSENATES, AND VANADATES —

172. Pyromorphite.

173. Apatite.

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SUPPLEMENT.

*Organic Compounds.*

174. Cannel coal.

175. Anthracitic coal.

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ROCKS.

*I.—Sedimentary or Stratified Rocks.*

1. CONGLOMERATE GROUP —

176. Quartz tufa.

177. Conglomerate.

178. Conglomerate travertine.

179. Breccia.

180. Breccia conglomerate.

181. Chert breccia.

182. Breccia conglomerate, angular rounded pins of quartz in a limestone cement.

---

2. ARENACEOUS GROUP —

183. Very fine-grained sandstone.

184. Sandstone flag w. dendritic manganese oxide.

185. Sandstone w. carbonaceous markings.

186. Sandstone altered at contact of trass.
  187. Ferruginous quartz rock.
  188. Ferruginous quartz.
  189. Sandstone.
  190. Shaly flag-stone.
  191. Calcareous sandstone.
  192. Cherty quartz in saccharine limestone.
  193. Flaggy quartzite.
  194. Millstone-quartzite.
  195. Schistose quartzite.
  196. Very fine quartzite and petrosilex.
  197. Very fine sandstone.
  198. Schist.
  199. Fine schist.
  200. Fine schist.
  201. Earthy schist.
  202. Earthy ferruginous schist.
  203. Schist w. adhering granite.
  204. Garnetiferous schist.
  205. Automolite in talc schist.
  206. Wrinkled schist.
  207. Fine sandstone w. plant remains.
  208. Contorted schist.
  209. Cupreous and ferruginous sandstone.
  210. Altered schistose sandstone.
  211. Fossiliferous sandstone, Paleozoic.
  212. Sandstone fossiliferous cement.
- 

### 3. ARGILLACEOUS GROUP —

213. Clay slate.
214. Slaty shale.

- 215. Slaty plant shale.
  - 216. Slate.
  - 217. Schistose slate.
  - 218. Slaty schist.
  - 219. Subschistose slate.
  - 220. Slaty schist w. chialstolite.
  - 221. Porcelainite.
  - 222. Silicious shale.
  - 223. Shaly clay.
  - 224. Coarse slate.
  - 225. Sandy shale.
  - 226. Carbonaceous shale.
- 

*Chemically and organically formed Rocks.*

1. COAL GROUP —

- 227. Lignite shale.
- 228. Lignite shale w. fish tooth.
- 229. Lignite.
- 230. Anthracite.
- 231. Coke possibly patroid.
- 232. Coke.
- 233. Coal.
- 234. Shaly coal w. plant remains.
- 235. Shaly coal w. plant impression.
- 236. Coal shale showing columnar stratum.
- 237. Coal measures clay, w. plants.
- 238. Coal shale.
- 239. Ferruginous coal shale.
- 240. Coal shale w. fish scales and shells.

## 2. IRON-ORE GROUP —

- 241. Limonite shale.
  - 242. Siderite.
  - 243. Clay iron stone w. fossils.
  - 244. Fossiliferous clay iron-stone.
  - 245. Hypersthene rock w. magnetite iron crystals.
- 

## 3. SILICEOUS GROUP —

- 246. Chert.
  - 247. Fine siliceous schist.
  - 248. Siliceous schist.
- 

## 4. CALCAREOUS GROUP —

- 249. Calcareous slate.
- 250. Earthy limestone.
- 251. Limestone.
- 252. Limestone w. gypsum.
- 253. Limestone flaggy w. dendritic manganese.
- 254. Limestone (oolite).
- 255. Limestone breccia.
- 256. Lime and gypsum.
- 257. Limestone tufaceous.
- 258. Murky limestone w. shells.
- 259. Oolitic limestone.
- 260. Calcareous gypsum.
- 261. Calcareous schist.
- 262. Chalk.

263. Chalky limestone w. coral.
264. Limestone ( chalk ) w. obscure fossil.
265. Calcareous encrustation.
266. Ferruginous limestone.
267. Ferruginous fossiliferous limestone ? Jodhpore.
268. Serpentinous limestone.
269. Schistose limestone.
270. Saccharine limestone w. garnet and epidote.
271. Satin-spar ( gypsum ).
272. Pisolitic pitch-stone.
273. Fossiliferous limestone.
274. Tufaceous shell limestone.
275. Limestone ( chalk fossiliferous ).
276. Marly limestone.
277. A clay-stone w. trilobite remains. Paleozoic.
278. A clay-stone w. tail of trilobite remains.  
Paleozoic.
279. Limestone, crinoidal w. bryozoa and  
brachiopods.
280. Shaly limestone w. productus paleozoic.
281. Coral limestone.
282. Nodule of fossiliferous limestone.
283. Ferruginous limestone.
284. Fossiliferous limestone.
285. Crinoidal limestone.
286. Fossiliferous limestone paleozoic.
287. Shell limestone.
288. Altered limestone.
289. Earthy limestone w. plants.
290. Earthy limestone.
291. Earthy limestone w. fish remains.
292. Earthy garnet stone, indurated.

- 293. Shale w. plant remains.
  - 294. Shale w. fish remains.
  - 295. Shale w. fossils.
  - 296. Greenstone porphyry.
  - 297. Verd antique, Genoa.
  - 298. Stalactite like concretions in dense limestone.
  - 299. Shell limestone.
  - 300. Limestone w. coccolite.
  - 301. Pearlspar and quartz or fluorite.
  - 302. Calcareous.
  - 303. Limestone w. corallinis.
  - 304. Pitch-stone.
  - 305. Pitch-stone porphyry.
  - 306. Porphyrite trass.
  - 307. Porphyrite.
  - 308. Porphyry.
  - 309. Porphyritic trass.
  - 310. Marble.
  - 311. Limestone w. bryozoa and crinoid stems.
  - 312. Shell limestone.
  - 313. Limestone w. fish remains.
  - 314. Coccolite in limestone.
  - 315. Coralline limestone.
  - 316. Block Kankar limestone.
- 

## 5. METAMORPHIC GROUP —

- 317. Gneiss.
- 318. Fine grained gneiss rock.
- 319. Gneissose quartzite w. small garnets.
- 320. Gneissose schist.

- 321. Gneissose quartzite.
  - 322. Garnetiferous gneiss.
  - 323. Fine grained gneiss.
  - 324. Gneissic quartzite with strings of feldspar.
  - 325. Hornblende gneiss.
  - 326. Syenite.
  - 327. Coarse syenite.
  - 328. Syenite or diorite.
  - 329. Syenite rock.
  - 330. Syenite felspar and hornblende.
  - 331. Syenite granite.
  - 332. Diorite trap.
  - 333. Diorite.
  - 334. Diorite schist.
  - 335. Diorite ( trass ).
  - 336. Orbicular diorite? Corsica.
  - 337. Mica rock.
  - 338. Mica biotite.
  - 339. Mica and quartz.
  - 340. Hornblende schist.
  - 341. Hornblende rock.
  - 342. Rose colored moscovite.
  - 343. Coarse diorite rock (mica and hornblende.
  - 344. Aphanite.
  - 345. Actinolite schist.
  - 346. Talcose schist.
  - 347. Actinolite in talc.
  - 348. Serpentine w. garnet.
  - 349. Serpentine w. magnetite or chromite.
  - 350. Green earth.
-



*Eruptive or Unstratified Rocks.*

## 1. PLUTONIC ( DIKE ) ROCKS—

- 351. Granite.
  - 352. Coarse granite or gneiss.
  - 353. Coarse granite.
  - 354. Coarse granitic rock, quartz, feldspar, and mica.
  - 355. Coarse gneiss.
  - 356. Coarse gneiss ( a granite ).
  - 357. Vein granite.
  - 358. Graphic granite.
  - 359. Granitic gneiss.
  - 360. Granitic veinstone.
  - 361. Granite rock, quartz and mica.
  - 362. Porphyritic granite.
  - 363. Calcareous trappean rock w. nodules of quartz.
  - 364. Earthy trap.
  - 365. Trap rock.
  - 366. Ashy trappean rock.
  - 367. Trappy contact rock, calcareous.
  - 368. Trappy or altered sandstone.
  - 369. Garnetiferous granite.
  - 370. Porphyritic trap.
  - 371. Diabase w. honzoite.
  - 372. Diabase.
  - 373. Diabase ( a trass ).
  - 374. Garnet schist.
  - 375. Garnetiferous schist.
- 

## 2.—VOLCANIC ROCKS—

- 376. Trachytic tufa.

- 377. Trachyte in crystals of anidine felspar.
- 378. Trachytic agglomerate.
- 380. Trachytic rock in color segregation.
- 381. Trachytic trass.
- 382. Trass (trachytic tuff.),
- 383. Trachytic tufa or rotten felstone.
- 384. Obsidian.
- 385. Pumiceous lava.
- 386. Pumice.
- 387. Pumiceous volcanic rock.
- 388. Petrosilex.
- 389. Felsite w. dendritic manganese on surface.
- 390. Felsite porphyry.
- 391. Felsite.
- 392. Felstone.
- 393. Felstone in broken slate.
- 394. Quartz porphyry.
- 395. Basaltic trap.
- 396. Basaltic amygdaloid.
- 397. Basalt.
- 398. Basalt w. olivine.
- 399. Basalt porphyry.
- 400. Felstone quartz porphyry.
- 401. Felstone w. cupreous and gypseous coatings.
- 402. Porphyritic felstone.
- 403. Basalt scoria.
- 404. Compact basalt w. olivine.
- 405. Columnar basalt.
- 406. Amygdaloidal basalt.
- 407. Amygdaloidal or geodic trass.
- 408. Amygdaloid.
- 409. Amygdaloid w. zeolite.

- 410. Vesicular basalt.
  - 411. Amygdaloid.
  - 412. Vesicular amygdaloid.
  - 413. Amygdaloidal trap.
  - 414. Fine amygdaloid.
  - 415. Volcanic scoria.
  - 416. Volcanic rock.
  - 417. Volcanic bomb.
  - 418. Vesicular lava.
  - 419. Volcanic breccia w. natrolite.
  - 420. Trass (volcanic tufa).
  - 421. Scoriaceous lava.
  - 422. Earthy felstone.
  - 423. Fine volcanic agglomerate or ash.
  - 424. Tuff-volcanic.
  - 425. Volcanic tufa.
  - 426. Lava enclosing a granite.
  - 427. Fine volcanic scoria.
  - 428. Lava.
  - 429. Volcanic.
  - 430. Ferruginous volcanic rock.
  - 431. Lava, w. olivine mica and augite.
  - 432. Cellular lava or trass.
  - 433. Augitic lava.
  - 434. Pinky amygdaloidal dolerite.
-

## LONG CASE No. DCLIX.

*Contents of the Drawers Nos. 37 to 45.*  
*Miscellaneous Collection of Minerals and Rocks.*

Nos. 6766 to 6858.

## DRAWER 37.

1. Coal.
2. Coal shale with plant impressions.
3. Shaly coal with plant impressions.
4. Coal shale showing columnar stratum at contact with trap.
5. Ferruginous coal shale.
6. Coal shale with fish scales and shells.
7. Coal shale.
8. A shell limestone, paleozoic.
9. Clink stone (trap).
10. Shistose slate with pyrites, carbonaceous.
11. Litharge, artificial.
12. Scheelite and lepidolite on quartz.
13. Shale with plant remains.
14. Carbonaceous shale.
15. Fossiliferous shale.
16. Shaly flag with fish impression.
17. Calcareous shale with fish remains.
18. Shale with fish remains.
19. Tufa.
20. Tufaceous breccia.
21. Chiastolite schist.
22. Cherty breccia.
23. Stalacite (more or less ferruginous) pebble of breccia-conglomerate. Like the Kaimur rock of Bundelkhand.

24. Plagioclase.
25. Calcareous ferruginous clay with plant remains.
26. Brown spar.
27. Automite.
28. Pyromorphite.
29. Antimonial ochre.

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DRAWER 38.

30. Fahlerz grey copper, Tetrache Glance.
31. Schistose quartzite.
32. Jaspideous quartzite.
33. Chalcopyrite.
34. Schiller-spar in serpentine.
35. Serpentine.
36. Chrysoprase.
37. Polianite.
38. Augite?
39. Phacolite.
40. Crayonnoir, black chalk.
41. Prase.
42. Cupreous pyrite.
43. Wolfram.
44. Litharge, artificial.

59. III.

45. Silicious skeleton pseudomorph. from which the original matter has been removed.
46. Hematite.
47. Pierolite on serpentine.
48. Chalcopyrite.
49. Pyrolusite.
50. Raphilite.

- 51. Melanite.
- 52. Silicified palm.
- 53. Trass ( Feldspathic tuff ).
- 54. Trass.
- 55. Trass ( felsitic ash ).
- 56. Dolerite.
- 57. Dolerite.

9 )

10.

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DRAWER 39.

1.

- 58. Trass.
- 59. Tin stone and lepidolite.
- 60. A veined contact rock.
- 61. A vein rock, felspar and hornblende.
- 62. Beryl in granite.
- 63. Pearlstone ( a pisolitic pitchstone ).
- 64. Zeolite.
- 65. A vein stone.
- 66. Quartzite.
- 67. Trappean rock with pyrites.
- 68. Spodumene, quartz, and felspar.
- 69. Acmite.
- 70. Pinite.
- 71. Pseudo-morphous quartz.
- 72. Petalite.
- 73. Thulite.
- 74. Yellow ochre.
- 75. Picrolite.
- 76. Thomsonite.
- 77. Silicified endogenous wood.
- 78. Molybdenite.
- 79. Dillage.

80. Schorl, &c.
81. Pleonaste, idocrase, &c.
82. Magnetite.
83. Rhætizite.
84. Malacolite.
85. Ferruginous plant shale.
86. Calcite, &c.
87. Decomposed pyrite.

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DRAWER 40.

88. Tufaceous shell gravel.
89. Vein stone.
90. Shale with fish remains.
91. Schist.
92. Finely laminated silt stone like the rock associated with Gwalior Iron ore.
93. Basalt prismatic.

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*Collection of Fossils.*

Nos. 6859 to 7005.

DRAWER 41.

1. Plesiosaurus sp. Jurassic.
2. Caudal vertebra of Ichthyosaurus sp. Liassic.
3. Euomphalus sp. Carboniferous limestone.
4. Atrypa sp. Upper Silurian.
5. Lepido Neudin. Coal measures.
6. Productus reticulatus. Carboniferous limestone.
7. Spirifer sp. Carboniferous limestone.
8. Gryphon incurva. Liassic.
9. Plagiostoma. Great Oolite.



10. *Asaphus* sp. Silurian.
11. *Pholidopharus* sp. (a fish). Jurassic (Liassic).
12. *Carpolites*.
13. *Ceypeastor complanatus*, D. & S. Gaj (Miocene) series.
14. *Breynia carinata*, oligocene (Tertiary), Karachee.
15. *Chasmops* (trilobite), Silurian.
16. *Mytilus* sp. Mesozoic.
17. *Calamites*, Coal measures.
18. *Conoclypeus Alveolatus* D. & S. Tertiary. Sind.
19. *Lima striata*. Triassic (Muschelkalk).
20. *Lepioolipis* sp. (a fish) Tarassic. Bavaria.
21. *Shephanoceras communis*. Liassic.
22. *Acrodus* sp. Liassic.
23. *Cpasmops* sp. Silurian.
24. *Nautilus* sp. Liassic.
25. *Myacites* sp. Triassic. (Muschelkalk).
26. *Halysites catenularia*. Upper Silurian.
27. Carnivore animal. Tertiary (oligocene), Paris.
28. *Helix* sp. Tertiary.
29. *Cyathocrinus*. Silurian.
30. *Cyathophyllum hexagonum*, (coral). Devonian.

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DRAWER 42.

31. Tooth of a fish, *carcharodon* sp. Tertiary.
32. *Cyathocrinus* sp. Devonian.
33. *Aegoceras* sp. Liassic.
91. 24. *Pecten* sp. Cretaceous form.
92. *Serp. Spondylus spinosus*. Upper Chalk.
93. *Belemnite antopheris* sp. Coal measures.
36. *Palæoniscus* sp. sp. of *Mucronaten*. Cretaceous.
37. B. field, Thuringia. Carboniferous limestone.
38. *Spirinobalus* sp. Ca

39. *Serpula* sp. Tertiary.
40. *Lepidodendron*. Coal measures.
41. *Calamites*. Coal measures.
42. *Ceratites nodosus*. Triassic. (Muschelkalk).
43. *Harpoceras* sp. Liassic.
44. *Streptelasma* sp. Carboniferous limestone.
45. *Calamites*. Coal measures.
46. *Nautilus* sp. Liassic.
47. *Productus* sp. Carboniferous limestone.
48. *Terebratula biplicata*. Jurassic.
49. Tarsal bone of a Hippotherian (?) Tertiary.
50. *Pentacrinus tuberculatus*. Liassic
51. *Peesiolampas rostrata*. Tertiary. Sind.
52. *Achinocrinus* sp. Devonian.
53. *Cardioceras Lamberchi*. Kelloway.
54. *Ellipsocephalus* sp. Cambrian.
55. *Cœlapleurus* sp. (Echinoid) Tertiary Form.
56. *Ariclites* sp. Liassic.
57. *Exogyra columba*. Upper Greensand.
58. *Pectunculus* sp. Tertiary (tray).
59. *Stephnoiceras* sp. Liassic.
60. *Cyrtina* sp. Carboniferous limestone.

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DRAWER 43.

61. *Sphenopteris* sp. Coal measures.
62. *Pectunculus* sp. Tertiary (Crag).
63. *Trioceramus* sp. Jurassic or Cretaceous.
64. *Micraster cortesludinarium*. White chalk.
65. Leaf impression "from the Plastic clay." T.
66. *Pterophyllum*, Rajmahal group of system.

67. *Ciolaris opipara* D. & S. Gaj (Miocene) series.
68. *Terebratula* sp. Mesozoic.
69. *Sigillaria*. Coal measures.
70. *Calamites*. Coal measures.
71. *Pentacrinus* sp. Liassic.
72. *Echinolampus Sindensis* D. & S. Tertiary.
73. *Calymene Blumenbachi*. Upper Silurian.
74. *S. Sigillaria*. Coal measures.
75. *Bellerophon* sp. Carboniferous limestone.
76. *Cardinia* sp. Jurassic.
77. *Xanthopsis Leachii*. (London clay).
78. *Pleurotomoria* sp. Carboniferous limestone.
79. *Harpoceras* sp. Inferior (oolite).
80. *Alethopteris* sp. Carboniferous (coal measures).
81. *Glyptocrinus* sp. Silurian.
82. *Cardinia* sp. Jurassic.
83. *Bronteus* sp. Silurian.
84. *Panopaea* sp. Jurassic.
85. *Spirifer* sp. Carboniferous limestone.
86. *Aegoceras planiosta*. Liassic.
87. *Harpocerasopalinum*. Inferior oolite.
88. *Veneriardia* sp. Tertiary crag.
89. *Clypeaster* sp. Tertiary.
90. *Echinolampus Sindensis*. D. & S. Tertiary.

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DRAWER 44.

*ratula* sp. Jurassic.

sp. Tertiary.

sp. Liassic.

*anoceras* sp. Permian (copper slate), Mans-

96. *Spiriferina* sp.
97. *Fenestella* sp. Permian Zechstein.
98. *Ceypeaster* (*rosaceus*?). Recent.
99. *Equus* sp. Tertiary.
100. Tooth of a fish. (*Psammodus*) Jurassic.
101. *Rhynchonella* sp. Mesozoic.
102. *Breynia carniata*. Oligocene (Tertiary). Hills north of Kurachee.
103. *Harpoceras viprans*. Liassic.
104. *Plagiostoma* sp. Great oolite (Jurassic).
105. *Spondylus* sp. Tertiary (?)
106. *Merista*. Upper Silurian.
107. *Zaphrentis* sp. Carboniferous limestone.
108. *The casmilia* sp. (coal). Upper Jurassic, (coral rag) Bavaria (?)
109. *Sigillaria*. Coal measures.
110. *Napicopsis* sp. (Silurian) ?
111. *Echinocrinus albogalerus*. White chalk.
112. *Cystiphyllum* sp. (Coral) Devonian.
113. *Pholadomya pancicosta*. Jurassic (Kimmeridge).
114. *Diplograpsus* sp. Upper Silurian.
115. *Apicrinus* sp. Jurassic.
116. Limestone. With Brachiopods and Bryozoa.
117. *Ichthyosaurus* sp. Cretaceous.
118. Tooth of fishes, *strepsodus sauroides*. Carboniferous.
119. *Lepidodendron*. Coal measures.
120. *Fungia*, sp. Cretaceous Form.
121. *Cinocardium hibernium*. Cretaceous.  
stone.  
White chalk.  
"Plastic clay." T

## DRAWER 45.

122. *Cidaris opipera* D. & S. Gaj (Miocene) series.
123. *Dalmania* sp. Silurian.
124. *Spirifer* sp. Silurian.
125. *Gryphœa incurva*. Liassic.
126. *Terebratula* sp. Jurassic.
127. *Monograptus* sp. Upper Silurian.
128. *Hoplites* sp. Gaull. Folkestone.
129. *Neuropteris* sp. Coal measures.
130. *Homomya* sp. Jurassic.
131. *Aviculopecten* sp. Carboniferous limestone.
132. *Elephas primi geniris*, B. C. Diluvian.
133. *Exogyra* sp. Cretaceous.
134. *Palæoniscus*, *Feries leheni*. Permian (copper-shale), Mansfield, Thuringia.
135. *Lepidodendron*. Coal measures.
136. *Palæoniscus* sp. a fish. Permian (copper shale) Mansfield.
137. Caudal vertebra of an *Ichthyosaurus* sp. Liassic.
138. *Lepidostrobus* sp. Coal measures.
139. *Saurichthys* sp. Liassic.
140. Humerus of a *Plesiosaurus*. Jurassic.
141. Slab of a withered limestone with encrinite stems, etc.
142. *Venus* sp. Cretaceous.
143. Coniferous fruit. Coal measures.
144. Stem of crinoid, probably *cyathorinus*. Silurian.
145. *Calamites*. Coal measures.
146. *Ceyx* sp. Gaj (Miocene) series.
147. *Rhinoceros* sp. Tertiary.

## ANIMAL KINGDOM No. I.

## CASE No. 245.

*Jeypore Trades.*

[ Workers or Dealers in Animal Products ].

Model of a bee, highly magnified, made by R. Brendel,  
Berlin.

7006

Coat and helmet, tortoise shell, old. Jeypore.

7007

Belt, embroidered. Jeypore.

7008

Whips, two. Jeypore.

7009-10

Harness, leather. Jeypore.

7011

Bag, leather, embroidered. Ajmere.

7012

Bags, two, leather. Ajmere.

7013-4

Bag, small, leather. Ajmere.

7015

Bag to hold water, leather. Chagal. Bikanir.

7016

Eight cords and other pieces made of cotton threads  
Mathura.

hite chalk.

lastic clay." T

## VEGETABLE KINGDOM.

*Frames on the Walls facing the window.*

Nos. 7025 to 7036.

A series of twelve plates showing the various phases of the rise and progress of civilization in Europe by means of animated pictures of representative periods. Published by A. Johnston, London.

1. Homestead at the beginning of civilization.
2. Charlemagne's Tribunal, 8th century.
3. In the cloister yard, 10th century.
4. A feudal castle, 13th century.
5. A baronial hall, 13th century.
6. A tournament, 13th century.
7. Siege of a city, 14th century.
8. Interior of a town, 15th century.
9. A citizen's parlour, 16th century.
10. Enlisting soldiers, 16th century.
11. Camp life, 17th century.
12. High life, 18th century.

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PILLAR FRAME No. 175.

*Reproductions of the great Fresco Paintings in Europe by the  
Arundel Society of London.*

1. Virgin and child, from a fresco by Filippino Lippi  
at Prato.
146. Cyprus. 7037
147. Rhinoceros in the Temple." From the fresco  
the convent of S. Mark, Florence.

7038



3. I. Angel. Fragment of a fresco by Melozzo da Forlì in the Sacristy of St. Peters at Rome.  
7039
4. S. James the Greater, before Herod Agrippa. From a fresco by Andrea Mantegna, in the Church of the Eremitani at Padua.  
7040
5. The Prophet Ezekiel. From the fresco of Michael Angelo in the Sistine Chapel at Rome.  
7041
6. The Prophet Jeremiah. From the fresco by Michael Angelo on the ceiling of the Sistine Chapel at Rome.  
7042
7. The Delphic Sibyl. From the fresco by Michael Angelo on the ceiling of the Sistine Chapel at Rome.  
7043
8. Theology. From a fresco by Raffaele in the Stanze of the Vatican  
7044
9. Poetry. From a fresco by Raffaele in the Stanze of the Vatican.  
7045
10. St. Anthony of Padua, healing the foot of a young man. From the fresco by Titian in the Scoula Del Santo at Padua.  
7046
11. The Apostles, Mark and Paul. From the picture by Albert Durer in the Gallery at Munich.  
7047
12. The Apostles, John and Peter. From the picture by Albert Durer in the Gallery at Munich.  
7048
13. The Madonna among the Meyer family. From the picture by Hans Holbein, in the possession of Her Highness the Princess Carl of Hesse Darmstad.

*Reproductions of Drawings by old masters in the British  
Museum, Part II. Published by the Trustees, 1891.*

The drawings shown in this collection are exclusively by the Italian masters, belonging to the 15th century and the beginning of the 16th, with one or two examples from later works.

1. Study for figure of an angel. Andrea Del Verrocchio.  
7050
2. Study for picture of a virgin and child with angels.  
Lorenzo di Credi.  
7051
3. Study of a girl's head. Domenico Ghirlandaio.  
7052
4. Study of a partly draped figure and of hands. Raf-  
faelino Del Garbo.  
7053
5. Sketch for an illustration to Dante. Luca Signorelli.  
7054
6. Study for the head and hands of an angel. Raffaello  
Sanzio.  
7055
7. Sketches for a figure of the Infant Christ. Raffaello  
Sanzio.  
7056
8. Study for the head of an angel. Francesco Francia.  
7057
9. Design for a picture of Rehoboam and the old man.  
Ferrarese School.  
7058
10. (A, B) Studies of Turks. A woman and a man seated.  
Gentile Bellini.  
7059

11. A.—Study for a virgin and child. Andrea Mantegna.  
5060  
B.—Study for a figure, probably the dead Christ.  
Andrea Mantegna.  
7061
12. Sketch for a picture of St. Christopher. Attributed  
to Barnardino Licinio. ("Il Pordenone.")
13. Portrait of a bearded man. Venetian School.  
7062
14. Sketch for an altar piece. Virgin and child with  
saints. Giovanni Battista Cima da Conegliano.  
7063
15. Leda and her children with the Swan. Anonymous.  
Milanese School.  
7064
16. Various studies for a virgin and child. Baldassare  
Peruzzi.  
7065
17. Study for a figure of Mary Magdalene. Alessandro  
Allori.  
7066
18. Henry IV. of France, signing a treaty. Ludovico  
Cardi, ("Cigoli").  
7067
19. Hercules and the Hydra. Giovanni Francesco Bar-  
bieri ("Guercino").  
7068
20. View of London from Sadler's Wells. Antonio Canale  
("Canaletto").  
7069
21. An archway in Venice. Francesco Guardi.

*Reproductions of the Autographs of some of the most  
celebrated Personages of England.*

1. Charter of Uihfred, King of Kent, A. D. 697. 7071
2. Drawing in the Hyde Register, 11th century. 7072
3. Letter of Henry of Lancaster, afterwards King Henry  
the Fourth. 7073
4. Declaration of the Bishops, A. D. 1538. 7074
5. Letter of Sir Philip Sidney. A. D. 1586. 7075
6. Letter of Arbella Stuart. A. D. 1609. 7076
7. Letter of John Hampden. A. D. 1642. 7077
8. Letter of Oliver Cromwell. A. D. 1649. 7078
9. Receipts for salaries paid to John Milton and others.  
A. D. 1655. 7079
10. Letter of Charles II., A. D. 1672. 7080
11. Letter of John Grahame of Claverhouse, A. D. 1679. 7081
12. Notes by George Fox, the Quaker. 7082
13. Letter of John Locke. A. D. 1704. 7083

14. Letter of Sarah, Duchess of Marlborough. A. D. 1710.  
7084

15. Letter of Dean Swift. A. D. 1728.  
7085

A series of 52 plates from a work on Indian Palæography (Prachin Lipi Mala) by Pandit Gauri Shankar Hira Chand Ojha, Secretary, Itihas Karyalaya, Raj Meywar, to illustrate the alphabets of Northern and Western India, Gandhara alphabets, alphabets of Southern India, Tamil alphabets, numerical symbols of the ancient times, alphabets of different Indian vernacular languages, and the gradual formation of the present Deva Nagri characters.

7086-137

Coloured plates from the *Royal Natural History Magazine*, edited by R. Lydekker, B.A., F.G.S., F.Z.S., London, illustrating all the forms of animal life beginning with the Vertebrata.

## CASE No. DCLIX.

### MYTHOLOGICAL CASE.

#### *Definition of Mythological Terms used in describing the Models.*

A Sadhu is one who abandons the world with the view of preparing himself for a future life.

They are divided under four classes, viz:—

1. Saivas ;
2. Vaishnavas ;
3. Kapaliks or Kanphatas (those who have the lobules of their ears bored), and

Those who worship Siva are called Saivas. There are seven sects of these, viz:—

1. Shikhi,
2. Mundi,
3. Jati,
4. Akdandi,
5. Dwidandi,
6. Tridandi, and
7. Virasaiva.

They wear rosaries of the Rudrakhsha (*Elæocarpus Ganitrus*) and mark their bodies with dust. Most of them wear long clotted hair and garments dyed in ochre. Their forehead marks are horizontal.

Those who worship Vishnu are called Vaishnavas. They are divided as follows :—

1. Ramanandi,
2. Nimbark,
3. Brandabani,
4. Baikhanas,
5. Haribyasi, and  
some others.

Their forehead mark is erect and the rosary they wear is made of Tulsi (*Ocimum Sanctum*) beads. Most of them have impressions of the foot marks of Vishnu made on their arms with red hot stamps. They wear clotted hair and a Kopin or waist band.

The Vaishnavas and Saivas are sometimes antagonistic towards each other.

Kapaliks are those who worship Bhairava (a form of Siva). They have metal or wood Mudras (rings) in the ears, and wear a bone in their locks on the head. They are to some extent allied to Saivas, but the true Saivas considerably differ from them in their liturgy or religious observances. They generally eat their meals from human

Nirgunas are the followers of Shankaracharya, and are Vedantists.

Nirguna devotees are generally termed Dasnamis, and have several sub-divisions—Giri, Puri, Bharati, &c.

Nirmalis, Udasis, &c., should also be included under them.

Kabirpanthis, Nanakpanthis, Dadupanthis, and other similar sects are of recent origin, and are generally called Nirgunas.

Besides those enumerated above, there are many Jain and Buddhist ascetics who are commonly known by the names Swetambar, Ractambar, Nilambar, Digambar, and Keshlunchak.

The models in the collection represent for the most part Saiva and Vaishnava ascetics with a few of other sects.

Most of them are shown practising some form or other of *Hatha Yoga*.

Yoga is the controlling or governing of the impulses of the erratic inner-self or Ego, so that it may not be capable of generating worldly desires. It aims at suppressing the workings of the mind and exercising a complete check over all, which tends to prevent the concentration of the mind within itself.

There are five states of the Ego, the inner self or mind. They are—

1. Kshipta,
2. Mudha,
3. Bikshipta,
4. Akagra, and
5. Nirudha.

The first state is Kshipta in which passions, anger, worldly covetousness, &c., are the ruling qualities of the mind. It is altogether engrossed in them, and is therefore incapable of being concentrated, as it is entirely taken up



by the pains and pleasures of life ; and the constant activity of the self, the chief characteristic of Rajoguna is never evanescent.

The second state is Mudha in which ignorance or darkness has its complete sway over the mind, in which a man is only a slave to evil propensities, and commits acts which he ought not to do.

The third state is Bikshipta in which Salvaguna is almost beginning to develop ; and the mind, under its influence, is always exerting itself to seek pleasure.

The Kshipta and Mudha states of mind are not favourable for the concentration of the inner-self or Samadhi ; and the Bikshipta state of the mind is merely a preliminary and preparatory stage of Samadhi.

The concentration of mind is secured by cultivating the two other states of mind, *viz.*, Akagra and Nirudha.

When the mind is in the Akagra state, one single subject alone absorbs its attention.

The Nirudha state of mind suppresses the spontaneous impulses of the mind, and does not allow it to be attracted by the external world.

In both the Akagra and Nirudha states of mind the mental activity, or the modification of the thinking principle, is held in suspension, and the consequent absorption of the mind in itself or the fusion of the Jivatma and the Paramatma is secured, which is the Samadhi or the culminating and final stage of Yoga.

When all the workings of the inner-self cease, then the conscious Ego or Atma is also at a standstill in itself. This is termed Samadhi. It is of two kinds, namely, Sampragnyat and Asampragnyat. The former is the partial, and the latter an absolute, absorption of the soul, and is the final stage of the Samadhi.

At the attainment of this stage, the workings of the inner-self or Ego in relation to the external world or non-Ego, are entirely suppressed ; and there is no consciousness of the triad—knower, knowledge, and the known.

Whoever acquires proficiency in any of the two is called a Raj Yogi, and he is said to possess Siddhis (extraordinary psychical and spiritual powers).

Hatha Yoga is only a stepping-stone to Raj Yoga.

The founder of Hatha Yoga is Siva, and that of Raj Yoga is Vishnu.

Hatha Yoga is practised in various modes of controlling Prana or breathing by means of Purak ( inhaling ), Re-chak ( exhaling ) and Kumbhak ( drawing in and retaining ) through the three Nadis—Ida, Pingala and Sushumna. Ida and Pingala are Nadis by which the breath is exhaled through the right and the left nostrils ; and Sushumna is in the middle of these two.

Hatha Yoga consists of several exercises which are—Asan, Kumbhak, Mudra, &c.

The first is Asan or posture, which is a particular method of exercise or drill. An ascetic by practising several forms of Hatha Yoga is endowed with all the necessary gifts calculated to give him control over Pran ( breath ), increase in the gastric functions, freedom from disease and concentration of mind. He becomes well prepared for attending the ensuing course of Raj Yoga.

This case contains models illustrative of Hindu Mythology, as well as almost all the forms of Hatha Yoga as they are practised by ascetics. They are mostly studies from life, and are described in Sanskrit books like *Gheranda Samhita*, *Siva Samhita*, *Hatha Yoga Pradipika*, *Rudra Yamala*, &c., &c.

1. Baddha Padma. Seated with the head bowed. Practised by a Nirguna devotee (ascetic). The object of this position is to obtain power over the Kundalini or the snake ring in the body of the man above the rectum ( sphincter ani ), by which are secured the removal of disease, the knowledge of the spiritual world, and knowledge of the spirit (conscience) within us.

2. Mukta Padma. It is practised in silence. The object is the same as described in No. 1. 7139
3. Mukta Padma, practised in silence. The object is the same as described in No. 1. 7140
4. Mukta Padma, practised in silence. The object is the same as described in No. 1. 7141
5. Siddhasana, practised in a deep thinking mood, by a follower of Vishnu. The objects are to secure salvation or Moksha, to get the Nadi or pulse purified, and to obtain latent knowledge (Divyagnyana). 7142
6. Siddhasana. For particulars see No. 5. 7143
7. Kukkutasana, practised by a Vaishnava or a follower of Vishnu in silence. Objects—Removal of disease, concentration of will, and increase of the first element (Satya) or righteousness within the heart of man. 7144
8. Gomukhasana, practised by a Saiva or follower of Siva absorbed in deep thought. It takes its name from the position resembling the face of a cow. The objects are the same as described in No. 7. 7145
9. Gomukhasana (another form), practised by a Vaishnava or follower of Vishnu. Objects—the same as described in No. 7. 7146
10. Gomukhasana, another form, practised in deep meditation, by a follower of Vishnu. The objects are the same as described in No. 7. 7147

11. Gomukhasana, another form, practised by a Nirguna ascetic in the position of prayer. The objects are the same as described in No. 7.

7148

12. Gomukhasana, another form, practised by a Nirguna ascetic in silence. The objects are the same as described in No. 7.

7149

13. Vrikhsasana, practised by a follower of Vishnu in a position of prayer. Objects, the same as described in No. 7.

7150

- 13 bis. Vrikhsasana, practised by a follower of Vishnu in a position of prayer. Objects, the same as described in No. 7.

7151

14. Vrikhsasana, practised by a Nirguna ascetic in silence. Objects the same as described in No. 7.

7152

15. Viparitakarni, practised by a Nirguna ascetic in silence. Objects the same as described in No. 7.

7153

16. Viparitakarni, practised by a Nirguna ascetic in silence. Objects the same as described in No. 15

7154

17. Swastikasana, practised by all sorts of ascetics. Objects the same as in No. 7.

7155

18. Pashchimataana. The objects of this are to set the course of breath from the Sushumna Nadi into the brain, to reduce the size of the abdomen, to remove disease, and to increase the appetite.

7156

19. Dhanurasana. The objects are to remove disease, to bring the mind into a state of concentration, and to increase the first element (satya) or righteousness.

7157

20. Kukkutasana. For particulars see No. 19. 7158
21. Uttana Kurma. For particulars see No. 19. 7159
22. Matsyendranath. Objects—To remove all sorts of diseases, to excite Kundalini or the sphincter ani, to increase the gastric fire, and to give the sensation of being bathed with nectar so that hunger is not felt. This process is called Chandra ki Sthirata. 7160
23. Vajrasana. For particulars see No. 5, Siddhasana. 7161
24. Muktasana. For particulars see No. 5, Siddhasana. 7162
25. Guptasana. For particulars see No. 5, Siddhasana. 7163
26. Shavasana. Its object is to remove fatigue and to give rest to the mind. 7164
27. Mayurasana. Practised to remove disease, to concentrate the mind in one particular object, to fix the first element of righteousness (satya) in the body; the ascetic who practises this experiences no complaint of indigestion and diseases of the abdomen, the spleen and mesenteric gland all disappear, and no poisons will act upon him. 7165
28. Vajrasana. Its object is to remove disease and to concentrate the mind. 7166
29. Padmasana. This is the best asana. Object the same as No. 28. 7167

30. Sinhasana. The ascetic who practises this mode of posture can control the three calls of nature.

7168

31. Matsyasana.

7169

32. Utkatasana.

7170

33. Siddhasana Prakasantara. Another form of Siddhasana.

7171

34. Matsyasana.

7172

35. Makarasana.

7173

36. Bhujangasana.

7174

37. Shalabhasana.

7175

38. Mandukasana.

7176

39. Gorakshasana.

7177

Nos. 31 to 39 are named after the modes of sitting of different animals. The objects are the same as described in No. 29.

40. Adhomukhwarija. Practised in silence by a Nirguna ascetic. Object the same as in the Padmasana.

7178

41. Aikpadasana. Practised in silence by a follower of Siva.

7179

- 41 bis. Aikapada. Practised in silence by a Nirguna ascetic.  
7180
42. Aikapada. Practised whilst bowing down by a Nirguna ascetic.  
7181
43. Aikapada. Practised in silence by a follower of Siva.  
7182
44. Ardhakapali. Practised in silence by a follower of Vishnu.  
7183
45. Uthanodar. Practised in silence by a Nirguna ascetic.  
7184
46. Kappyasana. Practised by a Nirguna ascetic who sits with five fires round him.  
7185
47. Kappyasana. Practised either in silence or in a deep state of concentration of the mind by a Nirguna ascetic.  
7186
48. Kamalasana. Practised by a follower of Vishnu in silence.  
7187
49. Viparitordhwapadma. Practised by a follower of Vishnu in silence.  
7188
50. Ardthagaruda. Practised by a Nirguna sect of ascetic in prayer.  
7189
51. Adhar Gomukha. See No. 50.  
7190
52. Kappyasana. Practised by a follower of Vishnu in prayer.  
7191



53. Ardha Garuda Bheda. Practised by a Nirguna ascetic.  
7192
54. Ardha Dhanurasana. Practised by a Vaishnava in the  
act of bowing.  
7193
55. Jhoolasana. Practised by a Kapalika ascetic in silence.  
7194
56. Jhoolasana. Practised by a Nirguna ascetic in silence.  
7195
57. Janwasana. Practised by a follower of Vishnu in the  
act of prayer.  
7196
58. Kubri Asana. Practised by a Nirguna sect of ascetic  
in silence. Eye diseases are said to be cured by this  
asana.  
7197
59. Kubri Asana. Practised by a Nirguna ascetic in si-  
lence.  
7198
60. Kubri Asana. The same as No. 59.  
7199
61. Kubri Asana. Practised by a Nirguna ascetic in si-  
lence.  
7200
62. Kubri Asana. Practised by a follower of Vishnu in  
the act of prayer.  
7201
63. Kubri Asana. Practised by a follower of Siva in the  
act of prayer.  
7202
64. Sinhasana, a variety of. Practised by a Vaishnava  
or the follower of Vishnu in silence.  
7203

65. Baddhasana. Practised by a follower of Vishnu in silence. 7204
66. Bhadrasana. Practised by a follower of Vishnu in silence. 7205
67. Sahajasana, Sukhasana or Ardhapadma. Practised by a follower of Siva in the act of prayer and with some motion of the hands. 7206
68. Sahajasana. Practised by a Nirguna ascetic in silence. 7207
69. Sahajahasana. Practised by a Nirguna Sanyasi in silence. 7208
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71. Sahajasana. Practised by a Nirguna Bairagi in silence. 7210
72. Sahajasana. Practised by a follower of Siva in profound meditation (Dhyana). 7211
73. Sahajasana. Practised by a Nirguna in silence. 7212
74. Sahajasana. Practised by a Punjabi of the Nirguna sect in the act of breathing out very slowly and never quickly, which is called Mahamudra. Mahamudra is supposed to destroy death and many other pains. It is said to cure consumption, leprosy, piles, indigestion, etc. 7213
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88. Sahajasana. A Nirguna follower of Siva in a silent mood. 7227
89. Sahajasana. A follower of Vishnu in the act of prayer. 7228
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7277



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148. A woman singing songs in honour of God on a stringed instrument or Sitar. 7288
149. Group showing a wife cooking and serving meals to her husband who sits on her left ; a scene from a Hindu household life. The religious mendicants are enjoined to frequent families on such occasions. 7289
150. Seated figure of a Saiva. 7290
151. A Nirguna Sadhu, seated, with his sacred fire and religious texts before him, appears to be reading from them to some person. 7291
152. A Vaishnava Sadhu, Ramanuj, playing on the guitar and singing hymns. 7292
153. A Nirguna Sadhu, Sanyasi, with a stick and kaman-dalu. A beggar. 6293
154. A Nirguna Sadhu with a tray in his hand. Beggar. 6294
- 155 to 168. Fakirs, (fourteen), standing. Saiva, Kapalik, and Nirguna. All religious beggars. 7295-7308
169. A Vaishnava Sadhu seated under an umbrella, worshipping Radha and Krishna. 7309
170. A Nirguna Sadhu standing with a bent stick (kubri) and tumbha (gourd). A religious beggar. 7310
171. A Nirguna Sadhu standing with tongs on his shoulders. A religious beggar. 7311

172. A Sanyasi standing with a stick and kamandalu in his hand. A religious beggar. 7312
173. A Saiva Sadhu Brahmachari, standing, with the devotee's bowl in his hand. 7313
174. A Nirguna Sadhu, standing, with a rosary and a pair of tongs in his hands. 7314
175. A Nirguna Sadhu, standing. A religious beggar. 7315
176. A Saiva Sadhu, standing. A pair of tongs and a devotee's bowl in his hands. 7316
177. A Saiva under an umbrella, and worshipping the Lingam God (symbol of Siva, the phallus). 7317
178. A Saiva religious mendicant, with a number of sectarian marks on his body. 7318
179. A Nirguna Brahmachari, smoking, seated under an umbrella. 7319
180. A Saiva under an umbrella, worshipping a Narbada Linga (stone from the Narbada river) and blowing a Shankha. The Shankha or conch shell blowing is used at the time of Siva worship. 7320
181. A Saiva Brahmachari under an umbrella and singing hymns with a stringed instrument (Tamboura and Kartal). 7321
182. A Kanphata (wearing large earrings) Jogi under an umbrella, reading a book of prayer. 7322

183. A Vaishnava Sadhu seated, resting on a crutch, and the sacred fire is in front of him. His disciple is sitting close by with a gourd (tumba). Other people surround him, one of whom is represented as prostrating himself before the Sadhu.  
7323
184. A Yogi with five fires around him (Panchagni). People torture themselves in this way to obtain sovereignty (beatitude) after this life in the next world. A number of persons are shown sitting around him.  
7324
185. A Saiva Sadhu playing on the Ektara, an instrument with one string.  
7325
186. A Saiva Sadhu, with a pair of tongs and a devotee's bowl in his hands.  
7326
187. A Nirguna Sadhu, standing, with a pair of tongs and a devotee's bowl in his hands.  
7327
188. A Saiva Brahmachari, standing with a devotee's bowl in his hand.  
7328
189. A Siva temple, Sivalaya. In the centre is the phallus, symbol of Siva, and around it are the worshippers. Siva is adored by all classes of Hindus.  
7329
190. A Saiva Sadhu, religious mendicant, playing on the Ektara, an instrument with one string, his alms bag and bowl hanging on his shoulders.  
7330
191. Nandi or the Bull, the vehicle of Siva, worshipped in temples dedicated to Siva.  
7331

192. A Saiva Sadhu, standing, with a pair of tongs in his hand. 7332
193. A Saiva Sadhu, standing with a brass lota in his hand to hold the alms received by him. 7333
194. A Nirguna Sadhu, standing and blowing a horn. 7334
195. Narhadeshwar Nath, stones obtained from the river Narbata, and worshipped as the phallus symbol of Siva. 7335
196. Dhundia. This is a sect of the Svetámbar Jainis. This sect has sprung up only since 300 years. The saints of this class tie a strip of cloth round their mouths with the idea that no animals will die in their warm breath. They also carry a broom, made of cotton threads, to sweep the ground upon which they sit, and live on alms. They ascribe no form to god. They do not worship images, but they pray mentally. They do not bathe or wash themselves for fear of killing other animals. They are very dirty. Their principal teaching is to discourage idolatory. They lecture or preach in a thanak or hall. 7336
197. A Mahomedan beggar. 7337
198. A person who plays on the Ektara, an instrument with one string, and lives on alms. 7338
199. Dakan or a witch, who is an object of great terror among the uneducated villagers, as she is supposed to take the lives of children only by casting the evil eye upon them. 7339

200. An Eunuch, who earns his livelihood by dancing and singing. 7340
- 201-2. Mahomedan beggars, two. 7341-2
203. A Mahomedan priest, reading the Koran. 7343
204. A Saiva sadhu, a religious beggar. 7344
205. A female religious beggar who plays on the Ektara and lives on alms, Kapalika. 7345
206. Standing figure of a beggar. 7346
207. A Vaishnava religious beggar. 7347
208. A Nirguna religious beggar. 7348
209. A female religious beggar, Nirguna. 7349
210. A Mahomedan beggar, extracting alms by showing an abnormal projection of his tongue from his mouth. 7350
- 211-4. Four Hindu religious beggars. 7351-4
215. The sacred cow with her young calf. The cow is worshipped by all classes of Hindus. 7355
216. Six sandstone slabs, circular, on feet, on which sandal paint for offering to the Gods is prepared. 7356

217. A Vaishnava Sadhu, singing hymns and playing on a tambourine.  
7357
218. A Sadhu playing with two pairs of Kartals (musical instruments) in both his hands.  
7358
219. A Vaishnava Sadhu playing on a stringed instrument and singing hymns.  
7359
220. A Vaishnava religious mendicant with a brass lota and cotton string to draw water from the well hanging on his shoulder and a stick in one hand.  
7360
221. A Vaishnava Sadhu with a rosary in his right hand.  
7361
222. Bala Bhagwan. The Infant Krishna sleeping on the leaf of a fig tree at the end of an age or Kalpa.  
7362
223. Krishna and his mistress Radha, as they are represented in Hindu miracle plays—Ras Mandal.  
7363
224. Shri Krishna Nag nath ta hua, Kaliyamanthana, Krishna dancing with a flute upon the hood of the great cobra, Kaliya or Nag Nath whom he subdued. A miracle of Krishna symbolising the triumph of a great soul over carnal desires and passions.  
7364
225. Image of Siva, with his trident—Damarn, (drum), and Harina (antelope)—in his hands, the Ganges on his head, and Parvati (his wife), and Ganesh (his son) on his knee, Nandi (the bull) his vehicle, sitting at his feet.  
7365



226. Kali upon Siva (Siva Shakti), Mahakali, standing on Siva, and wearing a necklace of human heads (Mundamala) and with a sword, trident, and Khap-par or the skull bowl.

This figure symbolically represents Prakriti and Purusha or Matter and Force which signify God's two-sidedness and in which lies the germ of creation. Matter and Force compose the whole universe.

7366

227. Mahishamardini Devi, killing the Buffalo-demon (Mahishasura). This is one of the forms of Durga Devi. The proper Mahishamardini is represented as 18-handed and mounted on a lion.

7367

228. A Saiva female religious mendicant in male attire.

7368

229. A Hindu female beggar who earns her livelihood by playing on a stringed instrument.

7369

230. Two Snake charmers, displaying a serpent which they have caught. They are followers of Siva, and carry about the snake to be worshipped.

7370

231. The worship of Rama, Lakshman, and Sita, with a number of figures adoring, accompanied with music and waving of lamp (arti) before them. It is a scene from the Ramlila, a Miracle play, which is performed every year during the Dasehra festival when the conquest of Lanka by Ram is celebrated.

7371

232. A group of Bengali Pandits or theologians, seated under a canopy, engaged in a hot discussion on some abstruse religious subject.

7372

233. Group of figures illustrating a Mahratta feast after a marriage and a number of persons employed in preparing and serving the dishes to the guests.

7373

234. Pith model of a temple. Madras.

7374

235. Pith model of a temple, (small). Tanjore.

7375

The above descriptions have been given by Pandit Lakshmi  
Nath Sastri, Principal, Sanskrit College, Jeypore.

### EAST CORRIDOR.

#### *South Indian Textiles.*

#### OCTAGONAL CASE No. 614.

Woman's scarf, floral patterns on a blue ground with border,  
printed muslin. Ojjein.

7376

Floor cloth, *jajam*, printed coarse cloth, floral patterns on  
brick red ground with border. Burhanpore.

7377

Lady's wrapper, *chunri*, small white spots on brick red  
ground with a border on a black ground, printed muslin.  
Ahmedabad.

7378

• Lady's wrapper, *lugri*. Human figures, birds, and small  
white spots on a black ground with a border on red  
ground, printed muslin. Ojjein.

7379

Woman's veil, *sari*, coarse cotton cloth, printed with  
floral patterns on a deep black ground with a narrow  
border on a red ground. Ahmedabad.

7380

Woman's veil, *sari*, floral patterns on a reddish white  
ground with a border on red ground, printed muslin,  
Broach.

7381

Woman's veil, *sari*, small floral patterns on yellow ground with a narrow border on red ground, printed muslin. Ahmedabad.

7382

Cotton cloth, Tie and Dye work, *chunri*, patterns formed by small yellow square spots with black dots in the centre on a black ground. Rutlam.

7383

Woman's veil, *lugri*, red ground with a narrow border stamped with metal. Ajmere.

7384

Woman's veil, *lugri*, blue ground, covered with floral diapers, printed cotton. Ojjein.

7385

Woman's veil, *sari*, close black strips on a red ground, with a border, cotton. Burhanpore.

7386

Cotton cloth, Tie and Dye work, red ground. Rutlam.

7387

Breast cloth, deep blue ground, yellow strips, having a light blue chain between them, hand loom. Nagpore.

7388

Woman's veil, *sari*, cotton, having a deep blue ground with white strips and a silk border. Cotton. Burhanpore.

7389

Floor cloth, yellowish white ground, animals and birds on the border, printed cotton. Palanpore, Trichinopoly.

7390

Woman's veil, *sari*, printed, coarse cloth (Rezi), having a white ground. Ahmedabad.

7391

Breast cloth, yellow, dark, and black strips, hand loom, cotton. Nagpore.

7392

Woman's veil, *sari*, yellow check pattern on black ground with a border, cotton and silk. Nagpore.

7393

Woman's veil, *sari*, deep blue ground with a red cotton and silk border, cotton. Burhanpore.

7394

Woman's veil, *lugri*, blood red ground, cotton. Burhanpore.

7395

Woman's veil, *sari*, stripped pattern with a border on red ground, cotton. Burhanpore.

7396

Breast cloth, cotton, *chantara*, hand loom. Hyderabad.

7397

Woman's veil, *lugri*, blue ground, cotton. Burhanpore.

7398

Woman's veil, *sari*, red ground with yellow border, cotton. Burhanpore.

7399

Woman's veil, *sari*, olive ground and a red border, cotton. Nassik.

7400

Woman's veil, *sari*, check pattern on a blue black ground with a red border, cotton. Broach.

7401

Woman's veil, *sari*, close yellow lines on a red ground with a red border, cotton. Nassik.

7402

Woman's veil, *sari*, close olive lines on a deep blue black ground with a red border, cotton. Nassik.

7403

Woman's veil, *sari*, close olive lines on a black ground with a red border, cotton. Burhanpore.

7404

Woman's veil, *sari*, olive and dark red lines with a red border, cotton. Surat.

7405

Woman's veil, *sari*, yellow and dark red lines with a red border, cotton. Nassik.

7406

Woman's veil, *sari*, deep red ground, cotton. Broach.

7407

Woman's veil, *sari*, black and red lines, silk. Nassik.

7408

Woman's veil, *sari*, green and red ground, cotton and silk. Ahmedabad.

7409

Woman's veil, *sari*, close yellow lines on a red ground, cotton. Burhanpore.

7410

Woman's veil, *Bhyrongarh sari*, blackish green ground printed with floral patterns and a red border, cotton. Indore.

7411

Long cloth, *dhoti*, with a blood red border, cotton and silk. Burhanpore.

7412

Woman's veil, *sari*, blue ground and a red silk border, cotton. Baroda.

7413

Woman's veil, *sari*, red ground, cotton and silk. Surat.

7414

Woman's veil, *sari*, black check on red ground and a red border, cotton and silk. Surat.

7415

Woman's veil, *Bhyrongarh sari*, blue ground and a red and green border, printed cotton. Indore.

7416

Long cloth, *dhoti*, cotton, with a red silk border. Burhanpore.

7417

Long cloth, Umrer *dhoti*, cotton, white ground with a broad cotton and silk border in red and yellow. Nagpore.

7418

Breast cloth, three, striped patterns, cotton and silk. Snrat.

7419

Breast cloth, striped pattern, cotton. Sholapore.

7420

Breast cloth, striped pattern in yellow, red, blue, and white cotton. Nagpore.

7421

Woman's veil, Bhyrongarh *sari*, red ground printed with floral patterns in white cotton. Indore.

7422

Woman's veil, *sari*, white ground covered with scroll patterns in red and black, coarse printed cloth. Baroda.

7423

Coarse cotton, Nanna cloth, printed with floral patterns in red and yellow. Rutlam.

7424

Woman's veil, Bhyrongarh *sari*, blue ground, covered with floral patterns and a red border. Indore.

7425

Coarse cotton cloth, blue ground, printed with floral patterns. Rutlam.

7426

Woman's veil, Bhyrongarh *lugri*, red ground, printed cotton. Indore.

7427

Woman's veil, Bhyrongarh *sari*, printed cotton. Indore.

7428

Woman's veil, Bhyrongarh *sari*, blue ground, printed cotton. Indore.

7429

Woman's veil, *sari*, white ground covered with floral patterns in black with a border, printed cotton. Baroda.

7430

Woman's veil, *sari*, black ground printed with Tie and Dye (chunri) patterns, cotton. Baroda.

7431

Bed cover, green and white squares in compartments, cotton. Ahmedabad Jail.

7432

Woman's veil, *sari*, white ground printed with figures of peacocks and men in red, and a red border, cotton. Baroda.

7433

Quilt, *razai*, green ground covered with large cone patterns with a scroll border on white ground, cotton print. Indore.

7434

Woman's veil, *sari*, blue ground, printed cotton. Baroda.

7435

Woman's veil, *sari*, patterns in red on a yellow ground. Baroda.

7436

Woman's veil, *sari*, cotton printed with chunri (Tie and Dye) patterns. Baroda.

7437

Woman's veil, *sari*, printed cotton. Baroda.

7438

Woman's veil, *sari*, reddish white ground covered with floral patterns and peacocks, printed cotton. Baroda.

7439



Woman's veil, *sari*, yellow ground covered with patterns in red, printed cotton. Baroda.

7440

Floor cloth, Chaurasa, cotton, printed with patterns in red, yellow, and black. Palanpore.

7441

Woman's veil, *sari*, white ground, printed cotton. Baroda.

7442

Woman's veil, *sari*, white ground covered with black and red floral patterns, printed cotton. Baroda.

7443

Woman's veil, *sari*, check pattern on a white ground. Tusar silk. Sambalpur and Bilaspur. Nagpore Museum.

7444

Bed cover, Khol, brick red ground, printed cotton. Palanpore.

7445

Bed cover, printed cotton. Palanpore, Trichinopoly.

7446

Woman's veil, Bhyrongarh *lugri*, black ground having yellow and red floral patterns, printed cotton. Ojjein.

7447

Bed cover, white ground and patterns in black and red printed cotton. Palanpore. Trichinopoly.

7448

Coarse cotton cloth, yellow ground having diaper patterns in red and black. Hindown, Jeypore.

7449

Wrapper, Khol, printed coarse cotton cloth. Palanpore.

7450

Floor cloth, *jajam*, printed coarse cotton cloth. Indore.

7451

- Wrapper, khole, printed coarse cotton cloth. Palanpore. 7452
- Wrapper, khole, printed coarse cotton cloth. Palanpore. 7453
- Floor cloth, *jajam*, printed, Gotampura. Rutlam. 7454
- Sari, printed, cotton. Ojeina, Rutlam. 7455
- Floor cloth, *jajam*, printed cotton. Palanpore. 7456
- Sari, woman's scarf, printed cotton. Baroda. 7457
- Floor cloth, *jajam*, printed cotton. Palanpore. 7458
- Wrapper, kholiya, printed cotton. Palanpore. 7459
- Sari, woman's scarf, blue ground with a printed border.  
Broach. 7460
- Sari, woman's scarf, printed cotton. Baroda. 7461
- Sari, woman's scarf, printed cotton. Baroda. 7462
- Sari, woman's scarf, printed cotton. Baroda. 7463
- Sari, woman's scarf, printed cotton. Ahmedabad. 7464
- Sari, woman's scarf, cotton. Baroda. 7465

- Lugri, woman's scarf, Bhyrongarh. Ojjein. 7466
- Sari, woman's scarf, printed cotton. Ahmedabad. 7467
- Sari, red ground, printed cotton. Baroda. 7468
- Sari, woman's scarf, printed cotton, yellow ground and scrolls in red. Baroda. 7469
- Sari, woman's scarf, printed cotton, diapers in red on a white ground. Ahmedabad. 7470
- Sari, woman's scarf, printed cotton, red ground, and white patterns on it. Ahmedabad. 7471

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### EAST CORRIDOR.

#### *Octagonal Case No. 625.*

- Lace curtain, white, floral and scroll patterns. Nottingham. 7472
- Lace curtain, yellow, white, floral patterns and female figures in compartments. Nottingham. 7473
- Lace curtain, patterns in blue, red, white, and yellow. Nottingham. 7474
- Lace curtain, white floral patterns and female figures in compartments. Nottingham. 7475
- Lace curtain, patterns in blue, white, red, and yellow. Nottingham. 7476

- Lace curtain, floral patterns on the border. Nottingham. 7477
- Lace curtain, floral patterns, white and yellow. Nottingham. 7478
- Lace curtain, floral patterns in white, blue, red, and yellow. Nottingham. 7479
- Lace curtain, floral scrolls, white. Nottingham. 7480
- Lace curtain, floral patterns, white. Nottingham. 7481
- Lace curtain, floral patterns, white. Nottingham. 7482
- Lace curtain, floral patterns, white. Nottingham. 7483
- Lace curtain, floral patterns, white. Nottingham. 7484
- Lace curtain, floral patterns, white. Nottingham. 7485
- Silk cloth, white lines on dark red ground. *Churia*. 7486
- Silk cloth, red ground and white spiral lines. *Misru*. 7487
- Lace curtain, floral patterns, white. Nottingham. 7488
- Woman's veil, *sari*, black ground, lines of red, yellow, green, and white conventional flowers arranged diagonally. With a border in yellow, green, and red. *Dacca*. 7489

Woman's veil, *sari*, black ground, lines of red, yellow, green, and white conventional flowers arranged diagonally on a black ground with a border in yellow, red, and green. Dacca.

7490

Sojni (bed cover), white ground, embroidered with raised silk patterns in blue, red, yellow, and black. Bokhara.

7491

Woman's veil, *sari*, black ground, embroidered with raised floral patterns, birds, fish, and other insects in white, yellow, purple, and red with a red border. The embroidery done in such a way as to show the same patterns equally well on both sides, silk. China.

7492

Woman's veil, *sari*, white ground with an indigo blue border, cotton.

7493

Woman's veil, *sari*, white ground covered with silk embroidery.

7494

Woman's veil, *sari*, white ground with a red border, cotton.

7495

Woman's veil, *sari*, lines of red, yellow, and white conventional flowers on a black ground with a border.

7496

Lace curtain, floral patterns in blue, red, and yellow. Nottingham.

7497

Lace curtain, white, floral patterns. Nottingham.

7498

Lace curtain, white, floral patterns. Nottingham.

7499

Lace curtain, floral patterns in blue, red, white, and yellow.  
Nottingham.

7500

Lace curtain, floral patterns in blue, red, white, and yellow.  
Nottingham.

7501

Lace curtain, white, floral patterns. Nottingham.

7502

Lace curtain, white, floral patterns. Nottingham.

7503

Lace curtain, yellow and white, floral patterns. Nottingham.

7504

Lace curtain, floral patterns in red, blue, white, and yellow.  
Nottingham.

7505

Lace curtain, floral patterns in red, blue, white, and yellow.  
Nottingham.

7506

Lace curtain, yellow and white, floral patterns. Nottingham.

7507

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### WEST CORRIDOR.

OCTAGONAL CASE No. 111.

*Containing the Punjab Phulkaries, &c.*

Phulkari, black ground with flowers in red and yellow silk.  
Amritsar.

7508

Phulkari, black ground with flowers done in red and yellow  
silk. Amritsar.

7509

Phulkari, dark red ground on a rezi cloth. Patterns done in yellow, green, and white silk. Amritsar.

7510

Phulkari, black ground, with patterns in red, yellow, and green silk and with wavy linear designs. Amritsar.

7511

Phulkari, with patterns in white and red silk on a dark ground. Badroom patterns in yellow silk. Amritsar.

7512

Phulkari, black ground with flowers in red, white, and yellow. Gullala pattern. Amritsar.

7513

Sari, black ground, set with glass. Phulkari pattern in red, white, and yellow silk. Amritsar.

7514

Lungi, scarf, from Ahmedabad Jail. Patterns in Badroom in yellow silk on a red ground. Used mostly by Gujaratis.

7515

Embroidered *sari* from Shekhawati, set with glass and with borders done in yellow silk and trimmed with lace on red saloo ground.

7516

Sari inlaid with glass. Red ground on a country cloth. Patterns done in yellow silk. Khetri.

7517

Phulkari, red ground with borders embroidered in yellow silk. Amritsar.

7518

Phulkari, white ground with borders done in red and green silk. Amritsar.

7519



Phulkari, red ground with leaf patterns done in green, white, and yellow silk. Amritsar.

7520

Phulkari, set with glass, red ground with patterns of scorpion done in green, yellow, and white silk, Amritsar.

7521

Gown or *ghagra* used by women. This is chiefly used by Banjara women. Black ground. Jats and Meywatis also use this. Patterns done in yellow silk in twigs. Khetri.

7522

Lugri or Phulkari, red ground, borders done in yellow silk and the end pieces ornamented in floral designs in white, yellow, and green silk. Amritsar.

7523

Cotton scarf or *lungi* from Rampore, ground yellow and red, ends done in green ornamentation.

7524

Phulkari, borders ornamented in red, yellow, white, and green silk. Amritsar.

7525

Lungi or scarf from the Ahmedabad Jail, with white, red, and green designs in square pattern and with wavy patterns in the ends.

7526

Phulkari from Amritsar, chiefly used for gowns for women. Borders lined with green silk and the ground dark red, ornamented with floral designs in yellow, white, and green silk.

7527

Razai or Printed quilt. Cotton, yellow ground. Lucknow.

7528

Razai or Printed quilt. Cotton. White ground. Lucknow.

7529

Razai or Printed quilt. Cotton. Ash ground with floral designs in pink and red. Lucknow.

7530

Razai or Printed quilt. Cotton. Pink ground ornamented with red flowers and green leaves. Lucknow.

7531

Razai or Printed quilt, cotton, white ground with floral designs in red. Lucknow.

7532

Razai or Printed quilt. Cotton. White ground with floral ornamentation in red. Lucknow.

7533

Bed cover, *palangposh*, white ground ornamented with a mango pattern in red and green, and borders ornamented with lotus designs. Lucknow.

7534

Bed cover or Mantel piece, white ground ornamented with variegated patterns. Lucknow.

7535

Razai or printed quilt, almond pale yellow ground, ornamented with flowers in red, white, and green. Lucknow.

7536

Bed cover, *palangposh*, ground variegated, ornamented with a mango design.

7537

Bed cover, *palangposh*, white ground, ornamented with a large Sikkim pattern and with four mangoes at the four corners at each end. Lucknow.

7538

Red blanket, *loi*, Bikanir.

7539

Sozni, needle-worked rug from Kotah. White cloth.

7540

- Silk hangings for palanquins and beds. Lahore. 7541
- Woollen *loi* from Bikanir, ornamented with wool embroidery in yellow, white, and blue designs. 7542
- Woollen *loi* from Bikanir, ornamented with wool embroidery in yellow and white. 7543
- Loi* from Bikanir, ornamented with white designs. 7544
- White blanket from Bikanir. 7545
- Red blanket from Bikanir. 7546
- A Jali (net) scarf dyed on two sides with two different colours. Ulwar. 7547
- Lungi from Rampore, N.-W. P., red and yellow with green border. 7548
- Lungi from Rampore, N.-W. P., red and yellow with yellow border. 7549
- Black bodice with glass inlay from Bikanir. 7550
- White blanket from Bikanir. 7551
- Woollen petticoat from Bikanir, red ground, with white squares all round. 7552
- Red blanket with black borders, Bikanir. 7553

Needle-work *sari* or veil, from Hindown, Shekhawati.  
Needle-work embroidery on a red saloo ground. 7554

Printed cotton mantel piece bought at the Simla Exhibition. 7555

Silk embroidered mat from Kotah. 7556

Phulkari from Amritsar, inlaid with glass in the border,  
patterns in yellow silk on pale red ground. 7557

Silk *romal*, handkerchief, red silk. Amritsar. 7558

Phulkari, white ground with patterns in red silk. Amritsar. 7559

Phulkari, red ground, with designs in yellow and green silk,  
twig pattern. Amritsar. 7560

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## OCTAGONAL CASE No. CLXIX.

### *Jeypore and Rajputana Cloths.*

Dupatta, wrapper, red patterns printed on green ground.  
Coarse cotton cloth. 7561

Dupatta, wrapper, black and red scrolls printed on white  
ground. Coarse cotton cloth, hand loom. 7562

Piece for woman's petticoat, white floral patterns, printed  
on red ground. Coarse cotton, hand loom. 7563

Dupatta, wrapper, red ground, printed in white and black  
patterns. Coarse cotton. 7564

Wrapper, Dupatta, coarse cotton cloth, printed with floral patterns in red on green ground.

7565

Piece of fine cotton cloth for quilts, printed with parrots perching on the branches of trees in red, green, and purple on yellow ground.

7566

Wrapper, Dupatta, having a border printed with birds in red and black on yellow ground with scrolls, cotton.

7567

Wrapper, Dupatta, white ground, printed with floral patterns in black, having a border of birds and shrubs in red and black on a tinted ground, cotton.

7568

Wrapper, Dupatta or Ingri, deep red ground, printed with patterns in pale tint, having a black border. Coarse cotton.

7569

Wrapper, Ingri, coarse cotton cloth, having white patterns on red ground.

7570

Woman's wrapper, Ingri, coarse cotton cloth, printed with brick red patterns on bronze black ground.

7571

Woman's wrapper, Ingri, coarse cotton cloth, printed with red floral patterns on blue ground.

7572

Woman's wrapper, Ingri, coarse cotton cloth, printed with red patterns on bronze black ground.

7573

Chunri, a specimen of Tie and Dye work, coarse cotton.

7574

Woman's wrapper, Ingri, coarse cotton cloth, printed with white patterns on pale brick red ground.

7575

Woman's wrapper, lugri, coarse cotton cloth, printed with  
pale tinted patterns on deep red ground.

7576

Woman's wrapper, lugri, coarse cotton cloth, printed with  
red patterns on dark red ground.

7577

Woman's wrapper, lugri, coarse cotton cloth, printed with  
diapers in black and white on brick red ground.

7578

Woman's wrapper, lugri, coarse cotton cloth, printed with  
conventional floral patterns in black and white on brick  
red ground.

7579

Chunri, woman's wrapper, a specimen of Tie and Dye work,  
cotton.

7580

Lugri, woman's wrapper, cotton cloth, printed with diapers  
in white on red ground.

7581

Woman's wrapper, lugri, cotton cloth, printed with patterns  
in red on dark red ground.

7582

Chunri or a specimen of Tie and Dye work.

7583

Chunri or a specimen of Tie and Dye work.

7584

Woman's wrapper, lugri, cotton cloth, printed with floral  
patterns in red and black on a tinted white ground.

7585

Woman's wrapper, lugri, cotton cloth, printed with a scroll  
border in black on white ground.

7586

- Woman's wrapper, lugri, cotton cloth, printed with floral patterns in black and red on white ground. 7587
- Woman's wrapper, lugri, coarse cotton cloth, printed with dark red floral patterns on white ground. 7588
- Woman's wrapper, lugri, coarse cotton cloth, printed with brick red floral patterns on blue ground. 7589
- Woman's wrapper, lugri, cotton cloth, white dots on dark blue ground. 7590
- Soosi, a piece of cloth with narrow lines in black and red, hand loom. 7591
- Soosi, a piece of cloth having white lines on red ground, hand loom. 7592
- Wrapper, Dupatta, fine cotton cloth having a border in gold thread, white. 7593
- Soosi, a piece of cloth, hand loom. 7594
- Woman's wrapper, lugri, cotton cloth, printed with red patterns on yellow ground. 7595
- Turban, Lahariya, a specimen of Tie and Dye work, cotton, having the ends in gold threads. 7596
- Soosi, a piece of cotton cloth, striped in red and blue, hand loom. 7597



- Soosi, a piece of cotton cloth, red and black, hand loom.  
7598
- Soosi, a piece of cotton cloth, striped, hand loom.  
7599
- Soosi, a piece of cotton cloth, red and white lines on bronze green ground, hand loom.  
7600
- Quilt, *razai*, coarse cotton cloth, printed with patterns in black and red on white ground.  
7601
- Quilt, *razai*, coarse cotton cloth, printed with patterns in red and black on tinted white ground.  
7602
- Soosi, cotton cloth, white lines on black ground, hand loom.  
7603
- Soosi, cotton cloth, having checks in black and red, hand loom.  
7604
- Misru, cloth having lines in black and dark yellow, silk and cotton.  
7605
- Soosi, cotton cloth having checks in black, yellow, and red. Hand loom.  
7606
- Soosi, white cotton cloth having checks in red. Hand loom.  
7607
- Soosi, check patterns, cotton, hand loom.  
7608
- Soosi, check patterns, cotton, hand loom.  
7609

Woman's wrapper, lugri, coarse cotton cloth, printed with pink white star-shaped floral patterns on dark red ground.  
7610

Woman's wrapper, lugri, coarse cotton cloth, printed with patterns in pink white on dark red ground.  
7611

Soosi, cotton cloth having checks in green on red ground, hand loom.  
7612

Soosi, cotton cloth having striped patterns, hand loom.  
7613

Soosi, cotton cloth, cross stripes in yellow, red, white, and black. Hand loom.  
7614

Soosi, cotton cloth having checks in blue and yellow, hand loom.  
7615

Soosi, cross stripes in blue and red, cotton, hand loom.  
7616

Cloth, coarse, printed with scrolls in white and red, hand loom.  
7617

Wrapper, printed with patterns in black on brick red ground, coarse cotton, hand loom.  
7618

Wrapper, printed with patterns in pink on brick red ground, coarse cotton, hand loom.  
7619

Piece of coarse cotton cloth, yellow, hand loom.  
7620

Wrapper, Dupatta, Tie and Dye work, cotton.  
7621

Wrapper, khas, cotton, hand loom.

7622

Chintz for gowns, patterns in yellow and red on dark ground.  
cotton.

7623

Wrapper, printed with patterns in black and red on brick  
red ground, coarse cotton, hand loom.

7624

Wrapper, yellow with a red border stamped with a scroll  
in silver, cotton.

7625

Wrapper, Tie and Dye work, cotton.

7626

Wrapper, Tie and Dye work, cotton.

7627

Wrapper, black ground, animals and floral patterns in yellow and red, Tie and Dye work, cotton.

7628

Wrapper, yellow with a red border having peacocks and  
floral patterns in yellow, blue, and red; Tie and Dye work,  
cotton.

7629

Wrapper, pink with a red border stamped with a scroll in  
silver, cotton.

7630

Wrapper, printed, coarse cotton, hand loom.

7631

Chintz for gowns, coarse cotton, hand loom.

7632

Chintz for gowns, coarse cotton, hand loom.

7633

Wrapper, peacocks and floral patterns, Tie and Dye work, cotton.	7634
Chintz, printed coarse cotton cloth, hand loom.	7635
Chintz, printed coarse cotton cloth, hand loom.	7636
Chintz, printed coarse cotton cloth, hand loom.	7637
Chintz, printed coarse cotton cloth, hand loom.	7638
Piece of coarse cotton cloth, fenestrated, probably for making money bags, hand loom.	7639
Floor cloth, coarse cotton, hand loom.	7640
Chintz, printed coarse cotton cloth, hand loom.	7641
Chintz, coarse cotton cloth, hand loom.	7642
Bag for money, coarse cotton, hand loom.	7643
Wrapper, Tie and Dye work, cotton, hand loom.	7644
Wrapper, printed, coarse cotton, hand loom.	7645
Wrapper, printed, coarse cotton, hand loom.	7646
Wrapper, brick red ground, coarse cotton, hand loom.	7647

	607
Chintz, printed, coarse cotton, hand loom.	7648
Chintz, printed, coarse cotton, hand loom.	7649
Wrapper, printed, coarse cotton, hand loom.	7650
Wrapper, Tie and Dye work, cotton, hand loom.	7651
Chintz, printed, red patterns on blue ground, hand loom.	7652
Wrapper, Tie and Dye work, red ground and yellow patterns, cotton.	7653
Wrapper, Tie and Dye work, black ground and floral patterns in red and yellow, cotton.	7654
Wrapper, printed cotton.	7655
Wrapper, printed cotton.	7656
Bed cover, Palangposh, printed cotton.	7657
Wrapper, Tie and Dye work, coarse cotton, hand loom.	7658
Wrapper, printed, red patterns on blue ground, cotton.	7659
Wrapper, printed cotton.	7660
Wrapper, printed cotton.	7661

Wrapper, Tie and Dye work.

7662

Wrapper, green, printed with a scroll border, cotton.

7663

Wrapper, pink, printed with floral patterns in green and red, cotton.

7664

Wrapper, yellow, printed with diapers in green and red.

7665

Cotton piece, coarse, yellow wrapper, Tie and Dye work ; cotton.

7666

Chintz, black ground and white patterns, coarse cotton, hand loom.

7667

Wrapper, brick red ground and patterns in black, coarse cotton, hand loom.

7668

Wrapper, pink, printed with patterns in red and green, cotton.

7669

Wrapper, printed, coarse cotton, hand loom.

7670

Wrapper, Tie and Dye work, cotton.

7671

Wrapper, Tie and Dye work, coarse cotton, hand loom.

7672

Three specimens of wrappers, Tie and Dye work, cotton.

7673-5

Wrappers, two, yellow ground, and diapers in red and green.

7676-7



	60
Wrapper, printed, brick red ground, coarse cotton, hand loom.	767
Wrappers, four, printed, Sangani work	7679-8
Wrapper, printed, coarse cotton, hand loom.	768
Turbans, six, white, coarse cotton, hand loom.	7684-5
Pieces, four, Rezi or coarse cotton cloth, hand loom.	7690
Towels, cotton, hand loom.	769